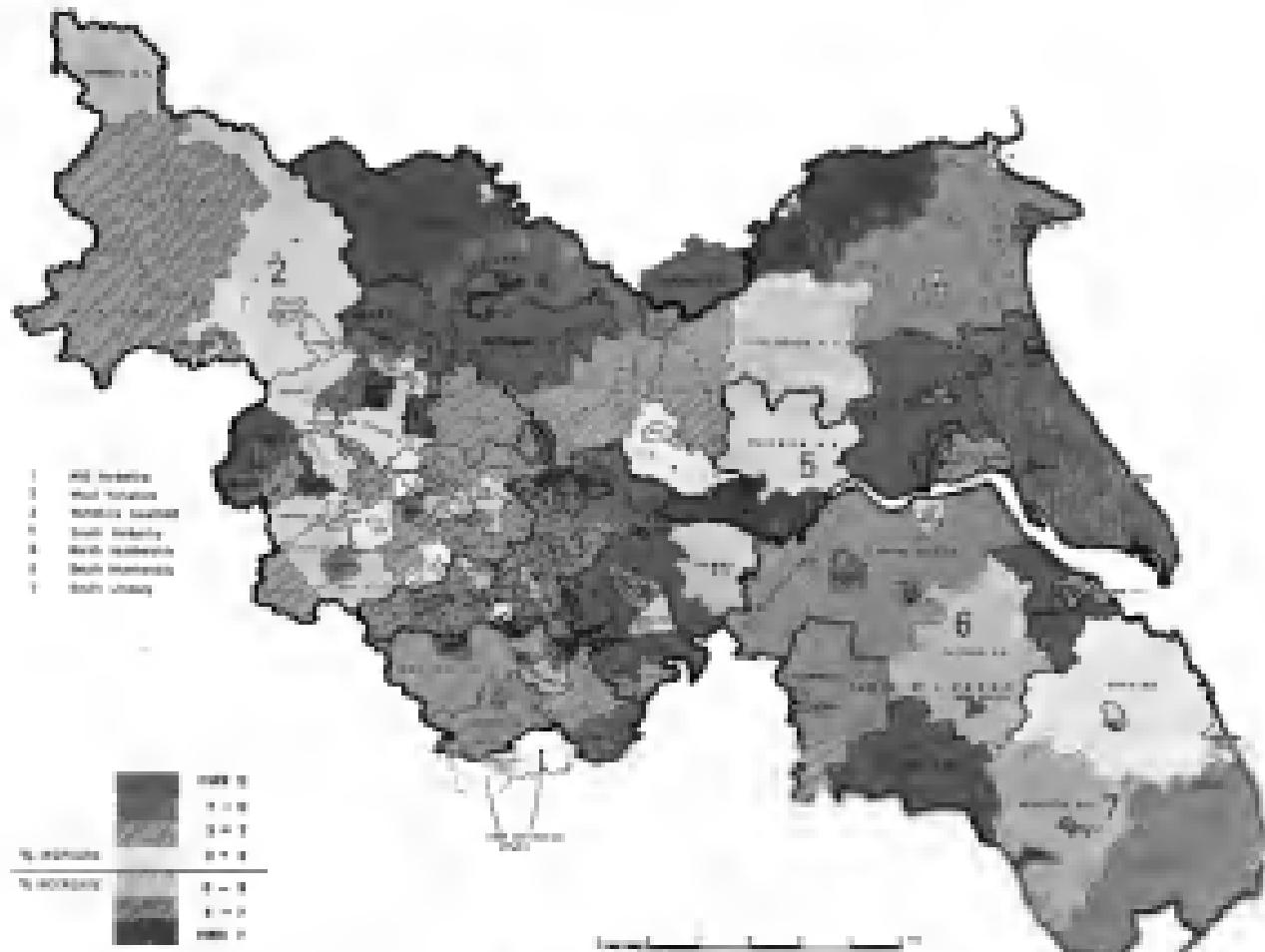
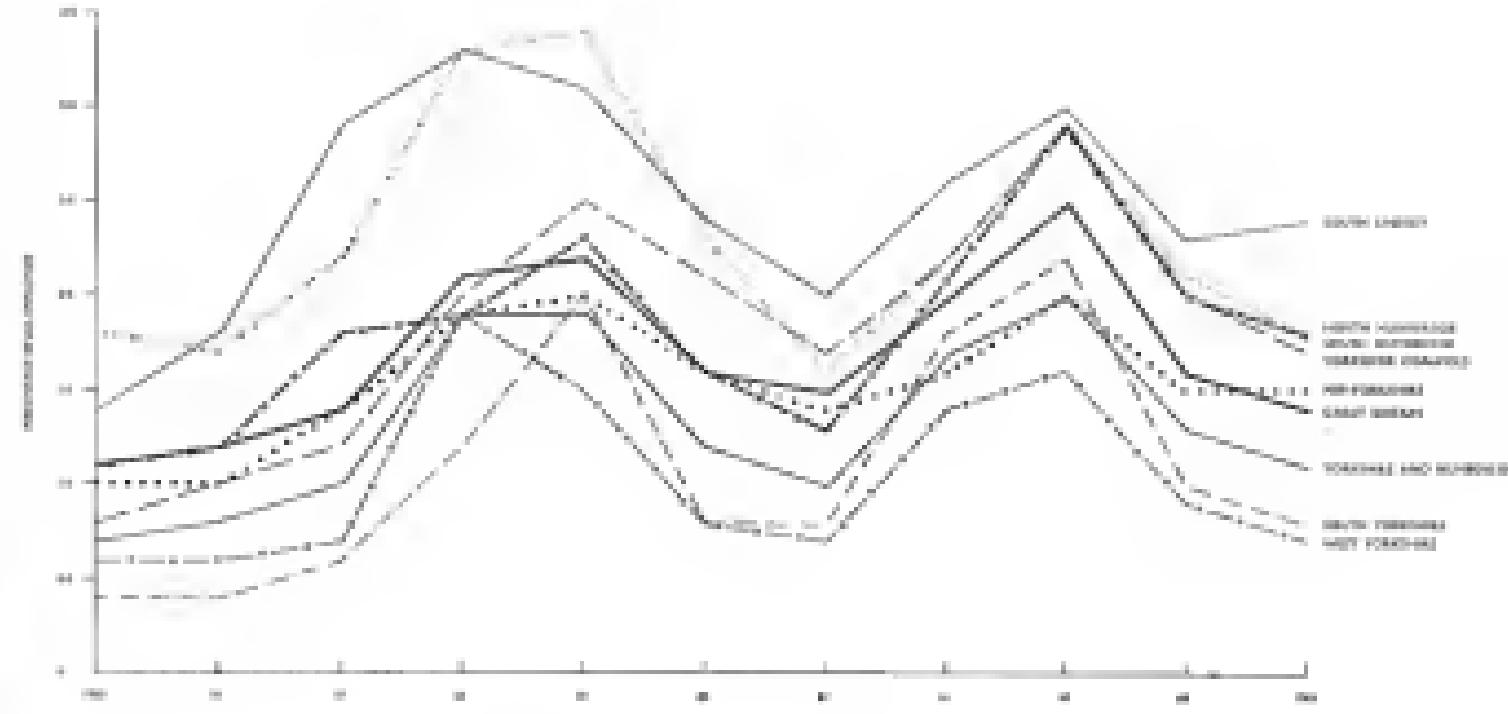
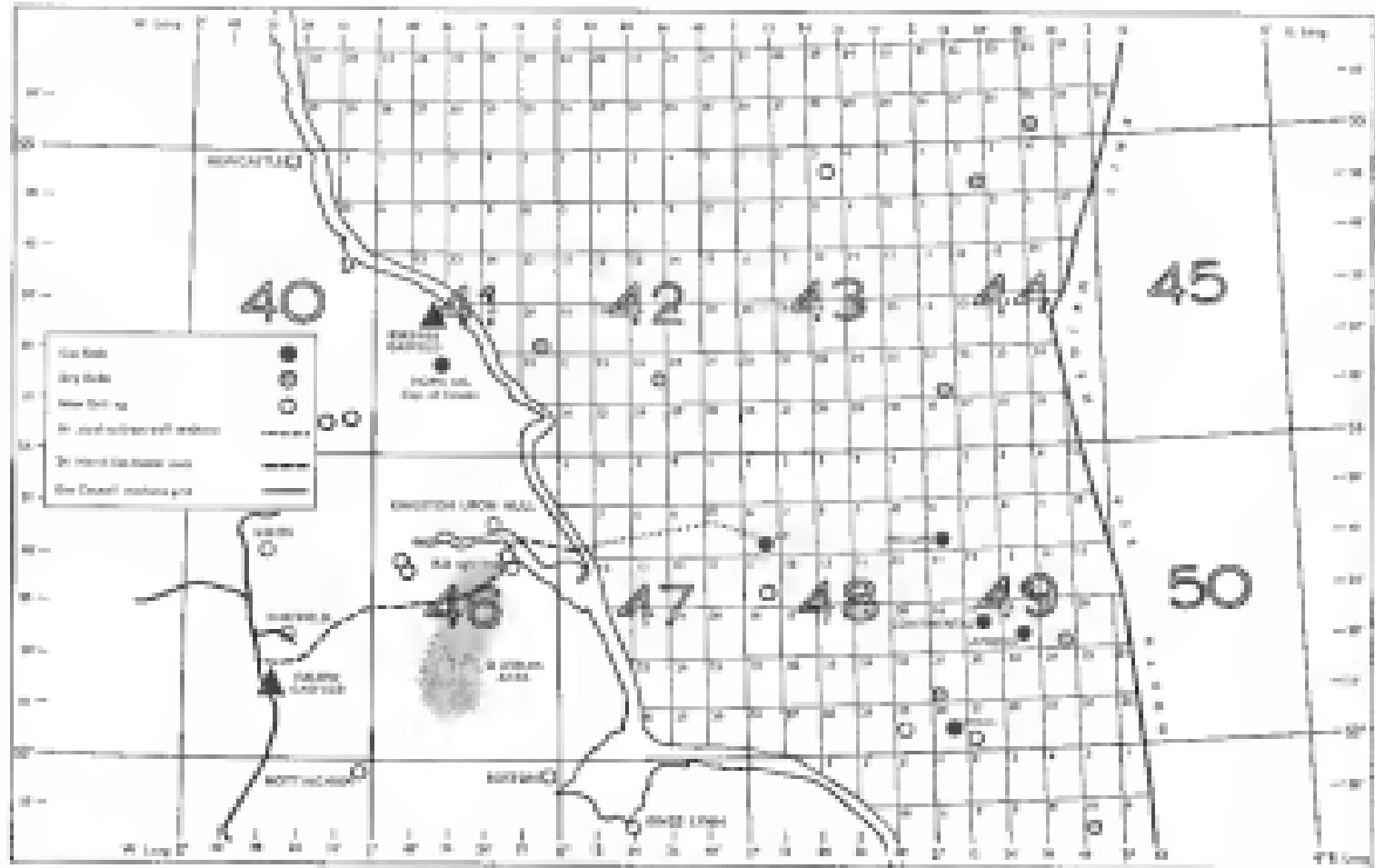
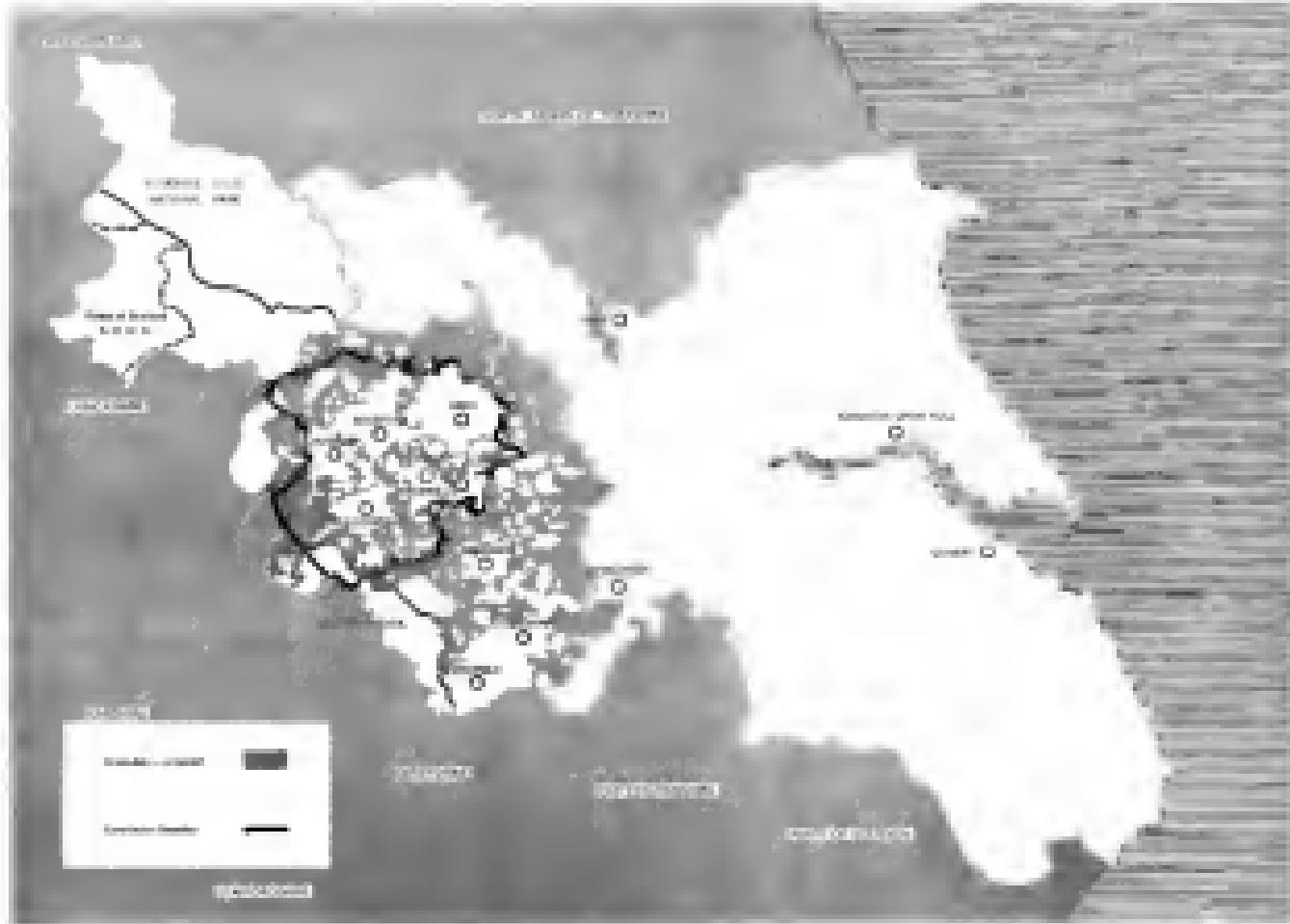


The total area of the established colonies in the colonies indicates the dimensions of and major areas of settlement in the colonies of the British Empire in 1880-90.









1 The Region and its Physical Planning Background

Main Features

1. The Yorkshire and Humberside Economic Planning Region was formed by the addition of Lincolnshire (Parts of Lindsey) to the earlier 'standard' region of the East and West Ridings of Yorkshire. The extension of the region to include Lindsey reflected the awareness of the potential economic importance of Humberside linked to the West Riding and, by the developing motorway system, to the Midlands and the North West.

2. The region's boundaries (see Figure 1) follow the boundaries of the geographical counties. York CB is included, Lincoln CB is excluded. The region has a population of about 4½ million (8·8 per cent of the national total) in an area of about 5,600 square miles (6·2 per cent of the national total). The population is by no means evenly distributed. The four largest cities, Leeds, Sheffield, Hull and Bradford, together contain more than one-third of the regional population. West Yorkshire, South Yorkshire and the Yorkshire Coalfield, together with Hull and York, account for nearly 4 million. The main built-up areas are shown on Figure 2.

3. The region presents very varied features. The general reference map (in pocket) shows that topographically it is dominated by the river system which reaches the sea at the mouth of the Humber. Many of these rivers rise in the western part of the West Riding, resulting in the narrow, steep-sided valleys where water-power contributed to the birth of the Industrial Revolution. Others, the Hull, the Derwent, the Yorkshire Ouse, the Trent and the Ancholme, are associated with extensive flood plains and with agricultural land of good and often excellent quality (see Figure 3). The western part of the region, roughly west of the line of the Great North Road, is upland and 'northern' in character. To the east the lowlands have more in common with the Midland Plain.

4. Geologically, moving from west to east, the Carboniferous Limestone and the Millstone Grit of the Pennines in the west give way to the Coal Measures, followed by the recent deposits of the Ouse-Trent lowlands; further eastwards a narrow band of Dolomitic Limestone and Ironstone, on which the steel industry of Scunthorpe is based, is followed by the extensive outcrop of the Lower Chalk in the Yorkshire and Lincolnshire Wolds. East of the Coal Measures, most of the surface deposits give rise to good agricultural soil.

5. The coastline of the region has not been intensively developed and for the most part the immediate hinterland is only sparsely populated.

6. As regards its economic structure, agriculture has always been, and remains, of great importance. Commerce by sea, also, has always played a large part. As long ago as the fourteenth century, when foreign trade was wholly with Europe, Hull was the third port in the kingdom. It remains so today, in terms of trade value. And Hull and Grimsby now account for half the value of the fish landed in Great Britain.

7. But it is with textiles, coal and steel that the region is now most commonly associated. The Industrial history of the region goes back to the earliest days of the Industrial Revolution, when rapid development resulted from the favourable conditions presented by water-power and ample supplies of coal.

8. Unfortunately the industrialisation of parts of the region in the late eighteenth and nineteenth centuries has left its mark on the urban areas in the form of a severe deterioration of environment and social conditions. This presents at once the most difficult and widespread physical planning problem and the most serious challenge for the future.

9. Not only is much of the social fabric of the

region outworn, or even decayed, but the communications system also urgently needs to be modernised. In most parts of the region, roads are quite inadequate for the needs of modern transport.

10. Nevertheless, it must be emphasised that the popular conception of the region as an out-of-date area of smoke and grime, pit heaps and dark steel-mills, is by no means entirely justified. While in many parts of the region environmental standards are low—and may indeed be so low as to inhibit economic growth—by far the greater part of the region consists of open land, often of very high scenic quality, and there is no town in the region from which attractive country cannot be reached by a comparatively short journey.

The Sub-Divisions of the Region

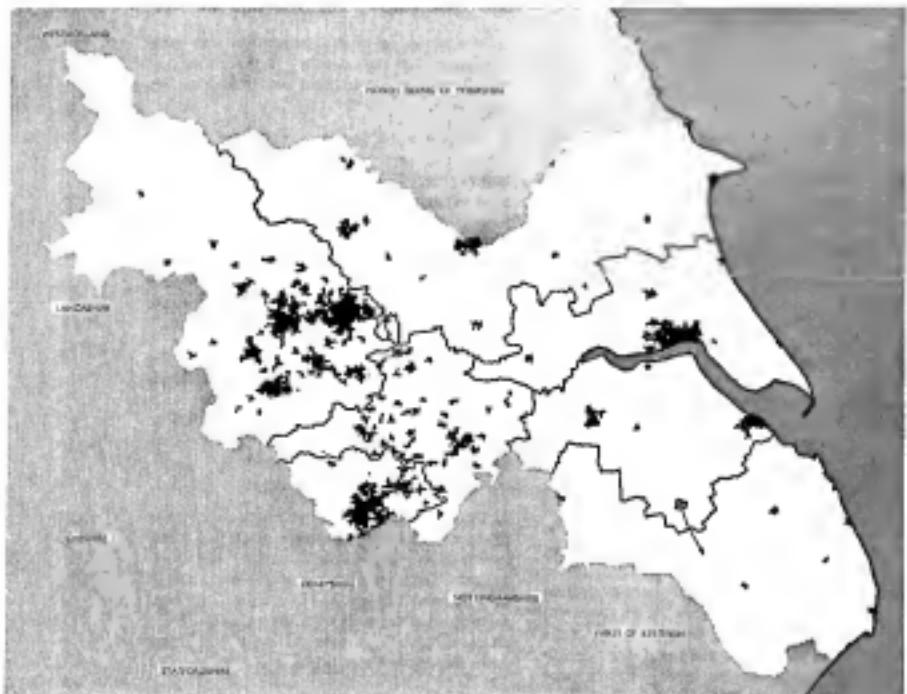
11. Although the regional boundary defines a zone in which economic and social links to

some extent create a recognisable unit, it is clear that a unit of this size—a large, diverse and complex region—cannot be adequately studied as a whole for purposes of physical and economic planning analysis. It is convenient to consider problems and prospects in the context of smaller areas. Purely for the purpose of this review, therefore, the region has been divided into seven sub-divisions (see Figure 4) which have no existence except in the context of the analysis in the ensuing chapters.

12. The sub-divisions have been drawn up primarily by reference to the pattern of economic activity, but physical and environmental considerations have also been taken into account. Their boundaries are defined by local authority and employment exchange areas. The three predominantly urban subdivisions, West Yorkshire, the Yorkshire Coalfield and South Yorkshire are based on textiles, coal and steel respectively, with engineering represented in all of them.

Fig. 2. The Main Built-Up Areas of the Yorkshire and Humberside Region

This map shows the extent of built-up areas at the latest date for which information on a uniform basis is readily available nationally. Open areas on the periphery of towns, e.g. hospitals, institutions and houses in large grounds and airfields, are not shown as built up; within towns only the largest open spaces are shown. Boundaries of the sub-divisions of the Yorkshire and Humberside Region are marked.



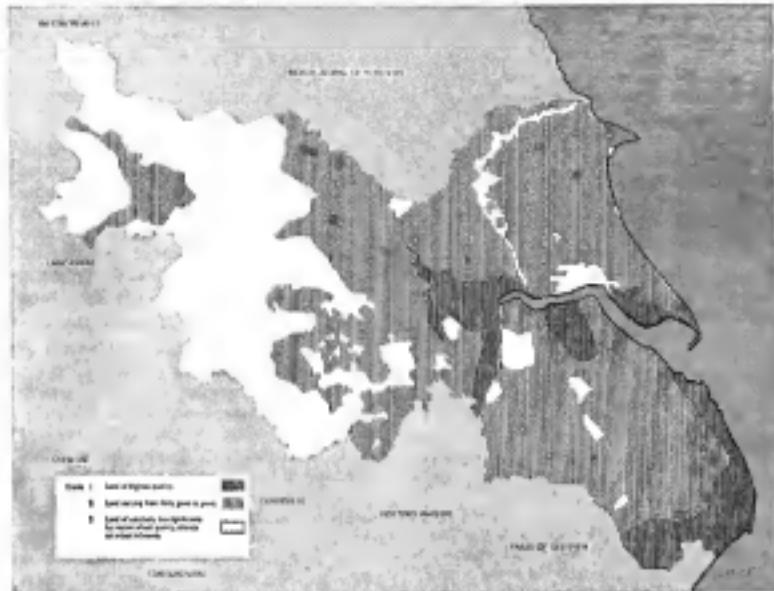


Fig. 3 Agricultural Land Quality

The classification of land is based on an assessment by the Ministry of Agriculture, Fisheries and Food.

Fig. 4 Sub-Divisions of the Yorkshire and Humberside Region



13. West Yorkshire is the most important of the seven sub-divisions in terms of population and employment. It includes the West Riding conurbation, a major centre of industry and commerce, together with many of the county districts within its sphere of influence to the north and west, and is an area which is broadly based economically, but leans heavily on wool textiles and certain sectors of engineering.

14. The West Riding conurbation does not present the same degree of cohesion as the other national conurbations, either physically, socially or economically. The hills and river valleys create a physical disunity and there is an almost Green Belt between the county boroughs resulting in a relatively low overall density of population. Moreover, the main lines of communication do not converge on a single dominant city and the social pulls (for shopping, entertainment and education) are divergent towards the larger towns.

15. There is a legacy of sub-standard housing and of industrial dereliction in the conurbation, one of the oldest industrial areas in the country, besides severe pollution both of the atmosphere and of rivers and streams. Generally, the cities and towns cry out for redevelopment and the improvement of social and recreational facilities. Since the second world war some progress has been made towards redevelopment and re-housing in the county boroughs and some of the county districts, but by and large the position remains appalling.

16. The industrial towns in the west of the conurbation, in particular Bradford, Halifax and Huddersfield, are faced to a greater or lesser degree with problems associated with a relatively low population growth and serious environmental difficulties. If these towns are not to be weakened economically by the drift of people and industry to other parts of the region, or indeed outside it altogether, action to tackle these problems is urgently needed. Decisions should be taken on the basic issue, namely, whether firms should be encouraged to develop and to expand in their existing locations in these towns rather than to move elsewhere.

17. Outside the conurbation, in the rural north-western parts of the sub-division, there has been a decline in population over many years (see Figure 8). This is in keeping with a national trend in rural districts not closely related to urban areas. The towns in the higher Pennine valleys to the south-west have also suffered a decline in population (caused both by a deficiency in natural increase and by migration, see Figures 10 and 11). This is a sign of a

particular and acute problem. In this area the topography, with its steep-sided valleys, is no longer favourable to modern economic activity, and the comparatively harsh climatic conditions resulting from the high altitude discourage industrial expansion.

18. One of the planning problems which require close examination is whether it will be possible to restore industrial and social vitality to these settlements. If this is not predictable, the valley bottoms, which are by no means unattractive, may have a future as residential areas if the outward signs of industrial obsolescence can be removed in the course of redevelopment.

19. The prevention of urban coalescence in West Yorkshire, particularly in and around the conurbation, is another important planning problem. A proposed Green Belt is still under consideration by the Minister of Housing and Local Government and, pending his decision, determines the planning control policy of much of the sub-division. The term 'Green Belt' is necessarily relative, for the green is frequently marred by sporadic development and the belt is not continuous; but the development is often confined to road frontages and much land is still open.

20. Green Belt policy in West Yorkshire, as applied by the local planning authorities and supported by the Minister on appeal, is directed first to the continued separation of the larger towns, and secondly to the containment of the conurbation to prevent its spreading north towards Wharfedale, eastwards towards the Vale of York and southwards to the group of South Yorkshire and Coalfield towns beginning at Barnsley.

21. In West Yorkshire the primary communications problem is to devise a modern road pattern for the conurbation to make the most of the national motorway and trunk road programmes, which will establish the future role of the West Riding as a focal point in north/south and trans-Pennine road communications, the northern equivalent of the West Midlands crossroads. Arrangements are being made for a comprehensive land use/transportation study to find the best solution to this problem.

22. At present there is not expected to be any planned overspill from the conurbation in the short-term, aside from voluntary movement to the north and east. There is still land for development in the conurbation (in the county boroughs as well as in the county districts) and the total population is rising only slowly. Thus it seems that from the standpoint of land required for urban development, the conurbation as a whole will for some

years be self-contained; but as land allocated for housing in current development plans becomes exhausted there could be pressure to develop unallocated land—and probably Green Belt land—both inside and immediately outside the conurbation. This process could be accentuated by a rapid increase in slum clearance programmes or by a substantial increase in population. It is therefore important that the problem of the availability of land for housing should be kept continuously under review, to ensure that there is no delay in the regional housing programme and to ensure that unforeseen demands do not force the use of land which, for planning reasons, should remain undeveloped.

23. The availability of land in West Yorkshire for industrial purposes is a separate issue. Many firms in the area need to re-house themselves, and industrial land will be required for this purpose. It will also be needed for the accommodation of expanding firms and of firms new to the area. The indications are that there will be sufficient industrial land available for these purposes, but here again the position should be kept under constant review.

South Yorkshire

1966: population—721,000, employment—386,000

24. This sub-division consists of Sheffield and Rotherham and their sphere of influence. Sheffield is the second largest city in the region, and the only urban area in it that is apparently short of land for development. This essentially represents the chief physical planning problem of the sub-division.

25. As elsewhere in the region, the environmental picture is one of sub-standard housing, outworn industrial buildings, derelict land and pollution of the atmosphere and watercourses; the position is made worse by difficult contours. While great progress has been made since the second world war, both in rehousing and in central area redevelopment, an enormous task still remains.

26. There must be doubt about the capacity of Sheffield, in the long term, to accommodate population growth and to provide enough land to support that growth with industrial development. Within the county borough some 6,700 acres in the west lie in the Peak National Park, and consist of virtually unpopulated and undevelopable moorland above 1,000 feet; apart from this flank end that where it adjoins the County Borough of Rotherham, Sheffield is completely contained by the West Riding's and Derbyshire's proposed Green Belts.

27. The recent decision of the Minister of Housing and Local Government to allow the extension of the county borough boundary to

take in the Mosborough area of Chesterfield Rural District is intended to provide a solution for Sheffield's land difficulties up to 1981. Whether or not it provides a complete solution is a matter for consideration when plans for the development of the area have been prepared, but it is clear that by 1981, if not before, the question of further overspill from Sheffield will have to be faced.

28. The shortage of industrial land within Sheffield presents a similar problem. Here again, provision has been made in the Mosborough area, but the future needs of industry are more difficult to forecast than the future levels of population.

29. Communications between the South Yorkshire sub-division and the rest of the region will be greatly improved when the motorways M1 and M18 are completed, but trans-Pennine links are and will still remain inadequate. The construction of M82 should provide some relief, especially in severe winter conditions, but further improvement is needed.

Yorkshire Coalfield

1966: population—787,000, employment—385,000

30. The Coalfield sub-division, in which the main towns are Barnsley and Doncaster, is the area which is dominated by coal mining as the major source of male employment and the social and economic implications resulting from this.

31. Derelict land is the most serious environmental problem. It is estimated that the West Riding has 10 per cent of the 90,000 acres in England and Wales, and that the Coalfield has almost half the West Riding total. The greater part of the derelict land here is in the form of active and disused colliery spoil heaps and severe mining subsidence; the largest pit heaps cover up to 100 acres. The crux of the problem is not so much the effect of past dereliction, bad though that is, as the fact that far more derelict land is created each year than is reclaimed for any purpose.

32. The planning problem here is that dereliction has a depressing effect on community life; that it is incompatible with the broad planning objective of improvement of the physical environment; and that its effect extends into the economic planning field because the presence of derelict land on a large scale deters industrial expansion. A much faster rate of reclamation is necessary if planning aims are not to continue to be frustrated. The change in the basis of grant aid for the reclamation of derelict land, which provides for grants of 80 per cent of their cost to any local authority in England and Wales, may bring about some improvement.

33. Housing conditions in the Coalfield do not present the worst aspect of urban environment; all parts of the sub-division have a lower proportion of unfit dwellings than the region as a whole. However, many of the villages are unplanned growths of terrace housing, related only to the colliery; this, together with the scattered distribution of the settlements themselves, creates a planning problem in the provision of community services and facilities.

34. Having regard to the increasing importance of the Yorkshire Coalfield in the national plan for the coal industry, it is clear that the future level of industry other than coal mining in the area is an economic planning problem of great complexity. It is sufficient to say here that there appears to be no insuperable physical obstacle to the introduction of other industry into the Coalfield. Some difficulty might be encountered in finding sites for industry and housing in the older parts of the field, but in the eastern part, with better contours, better environment and better communications, conditions would be more favourable.

North Humberside

1966: population—447,700, employment—251,000

35. In the absence of any system of communication between this sub-division and South Humberside it is necessary to treat the two areas separately for the purposes of this review but this should not distract attention from the fact that such a system is of vital importance to the realisation of the potential of Humberside as a whole.

36. North Humberside at present consists of 'Greater Hull' and a wide hinterland which is essentially rural in character. For many years the natural growth of population has exceeded the growth of employment, resulting in a loss of population by migration. There is clearly scope for industrial expansion, but this is a matter which will be considered as a factor in the study of Humberside as a possible growth area recently announced by the central government.

37. Hull has a very large slum clearance problem and the communications problems, both within the city and with other parts of the region, are severe. In other respects, environmental conditions in Hull and in North Humberside generally are much more favourable than in the urban areas of the West Riding.

38. Apart from drainage difficulties in the vicinity of the River Hull, there appears to be no physical planning reason why sufficient land should not be available for housing and industry to meet any future demands in this sub-division.

South Humberside

1966: population—288,600, employment—128,000

39. As with North Humberside, the economic aspects of the future of this sub-division are to be considered in a special study of the estuary as a whole.

40. The sub-division appears to be an area offering almost unlimited scope for the reception of population and industry. There are four main physical planning problems. First, the question of road communications with the west, which are quite inadequate even for the present volume of industrial and commercial traffic. Secondly, the advantages of the South Humber Bank for intensive industrial development associated with the deep-water channel have created a problem of ensuring that land with access to the Humber remains available for additional industry which must have this facility. Thirdly, the location of residential areas needs consideration in view of the risk of unavoidable atmospheric pollution created by the specialist industries now being developed along the estuary. Finally, water supply is at present a limiting factor in the growth of the area; an interim solution has been devised, but the ultimate demand seems likely to be much greater than can be met without bringing water from the Trent or beyond.

Mid-Yorkshire

1966: population—387,100, employment—161,000

South Lindsey

1966: population—144,100, employment—37,000

41. Apart from York, Gainsborough and the West Riding towns of Hemsgrove and Ripon, these two sub-divisions are almost entirely rural in character; the other urban settlements are small market towns which serve as centres for local villages and the surrounding agricultural community. There is some commuting between the conurbation and villages in Mid-Yorkshire, but this does not give rise to any planning problems beyond the range of Hemsgrove/Wetherby/Tadcaster.

42. York is a special case, with acute planning problems of a local character. The significance of its preservation as a city of outstanding historical and architectural importance has recently been recognised by its designation as one of five towns in the country to be the subject of a special study on behalf of the Minister of Housing and Local Government.

43. A continued increase in the population of York seems likely; the development of the university has not yet reached its final stage, and the city's cultural vitality and its good rail communications with London and the north may make it in the future an attractive centre for offices and commercial firms. A solution

for the city's domestic problems, particularly internal road communications, should precede any further expansion.

44. Elsewhere in the sub-divisions the need is to maintain and increase the prosperity of the towns and larger villages as local centres. Many of them have attracted industry on a small scale, usually but not invariably associated with agriculture or agricultural machinery. Such development helps to mitigate the effects of the reduction of agricultural employment and the consequent depopulation of the rural areas, and should be encouraged whenever possible. Efforts should also be made to ensure that public transport services, especially at weekends, are timed to enable the inhabitants of the villages and small towns to visit centres where a wider choice of social facilities is available.

Conclusions

45. The foregoing has drawn attention to the

more important physical planning problems of the region and its sub-divisions, and the background to them. It is clear that while there may be a common thread in the region's economic problems generally, namely, the comparatively slow rate of industrial growth, no such common thread exists in the physical planning field. Land use problems in South Lindsey have nothing in common with those of the Yorkshire Coalfield, and the pressure for land which is a feature of South Yorkshire does not exist in North Humber side. The physical planning problems of the region are therefore the sum of those of the sub-divisions. But the issue which is of paramount importance to several of the sub-divisions is the improvement of the physical environment in the urban areas. This, in the Council's view, is the most urgent physical planning problem in the region; it must be tackled quickly, both to remedy existing conditions and because the bad environment is a major obstacle to industrial expansion and greater economic prosperity.

2 Population: Growth and Movements

The General Picture

46. In mid-1965 the civilian population of the Yorkshire and Humberside Region was estimated by the Registrar-General at 4,699,600; with 3,503,000 acres, the gross density of the region at that time was 1.3 persons per acre. This regional average conceals wide variations among the sub-divisions, from 0.4 in South Yorkshire to 0.2 in South Lindsey. (See Table 1.) The density of the West Yorkshire sub-division, 2.1 persons per acre, similarly conceals a wide variation between the West Riding conurbation and the sparsely populated north-west of the sub-division. The density of the conurbation, 5.6 persons per acre, is reduced by extensive areas of undeveloped land above the 800 foot contour; In the developed areas the density is considerably higher.

47. The distribution of population throughout the region is uneven, with a heavy concentration in the southern and western parts of the West Riding. Of the seven sub-divisions referred to in Chapter 1, three—West Yorkshire, South Yorkshire and the Yorkshire Coalfield—represent about 72 per cent of the regional population but only about 39 per cent of the regional area. The remaining sub-divisions—Mid-Yorkshire, North and South Humberside and South Lindsey—are predominantly rural and sparsely populated. The general picture therefore is of a region with population heavily concentrated in the industrial parts of the West Riding, with Hull, York, Grimsby and Scunthorpe as the only major settlements east of the Great North Road.

48. Between 1881 and 1931 the region maintained a constant share of the national population. Since then it has declined steadily,

TABLE 1
Civilian Population and Population Density, Yorkshire and Humberside, 1965

Area/Sub-division	Civilian Population 1965		Area in Acres		Gross Population Density Persons per Acre
	1000	%	1000	%	
Yorkshire and Humberside	4,699.6	100.0	3,503.1	100.0	1.3
West Yorkshire	1,913.6	45.7	884.2	25.5	2.1
South Yorkshire	721.6	16.4	133.6	3.8	5.4
Yorkshire Coalfield	767.0	16.9	328.4	9.5	2.4
Mid-Yorkshire	367.1	8.2	622.6	18.5	0.6
North Humberside	457.7	10.0	369.2	10.3	1.3
South Humberside	296.6	6.4	370.3	10.6	0.6
South Lindsey	544.1	12.1	535.8	15.6	0.2

and although the population of the region rose from 4.3 million in 1931 to 4.7 million in 1965, its share of the national (Great Britain) population fell from 9.6 per cent to 8.9 per cent. (See Figure 5 and Appendix A14). Since 1961 the rate of increase has been little more than half that of the country as a whole. There have been two reasons for this relative decline. First, the rate of natural increase has been slightly below the national average; second, and more important, there have been consistent net losses of population from the region. Population losses due to migration amounted to just over 100,000 between 1961 and 1965, sufficient to offset nearly one-third of the natural growth during the same period.

49. Total population growth since 1951 in Yorkshire and Humberside amounted to an increase of about 240,000 (5.4 per cent compared with 8.0 per cent nationally) but rates of growth have not been similar in all parts of the region. Lindsey and the Yorkshire Coalfield, for example, experienced a rate of growth greater than the national average between 1951-65. Elsewhere in the region there have been very low rates—particularly in the West Riding conurbation and in the Sheffield area—reflecting movements away from some of the heavily congested and environmentally less attractive industrial towns of the West Riding.

Natural Increase

50. The volume of natural increase in Great Britain as a whole reached a post-war peak in 1947, after which it began to decline. This trend was not reversed until 1955 (see Appendix A3-7). Since then it has increased rapidly, reflecting progressive rises in the birth rate. In the Yorkshire and Humberside Region the birth rate has followed the rising national trend, and was in fact above the national rate during the early years of the period; the death rate, however, has also been higher than the national average.

51. The consequent rate of natural increase in the Yorkshire and Humberside Region has followed the national trend, but has throughout been marginally below the national level: 1.9 per cent compared with 2.1 per cent in the period 1951-55, 2.4 per cent compared with 2.6 per cent in 1956-61, and 2.6 per cent compared with 2.7 per cent in 1961-65.

52. Within the region birth rates have been higher in the Coalfield and in North and South Humberside, where they have been 2.8 per thousand above the national average and 2.0 per thousand above the regional average; death rates, on the other hand, have been particularly high in West Yorkshire where,

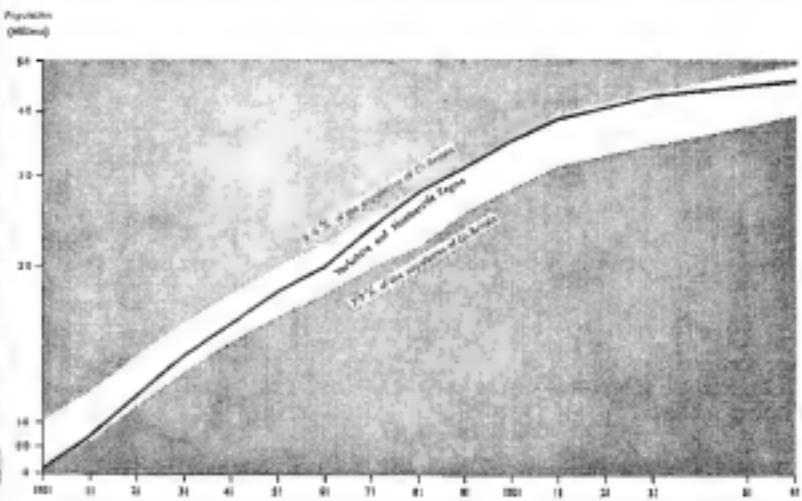


Fig. 5. Great Britain and Yorkshire and Humberside Region: Population Changes, 1801-1961

During the 160 years since the first census in 1801, the proportion of the total population of Great Britain living in Yorkshire and Humberside has ranged between 7.7% (in 1931) and 8.0% (in 1901). In this diagram the population of Yorkshire and Humberside at each census is plotted on a logarithmic scale; populations equivalent to 1.7% and 3.4% of the population of Great Britain as a whole at each census are also depicted. The diagram thus affords a comparison between rates of population growth in Yorkshire and Humberside and in Great Britain, and shows how the region's share of the country's population has fluctuated.

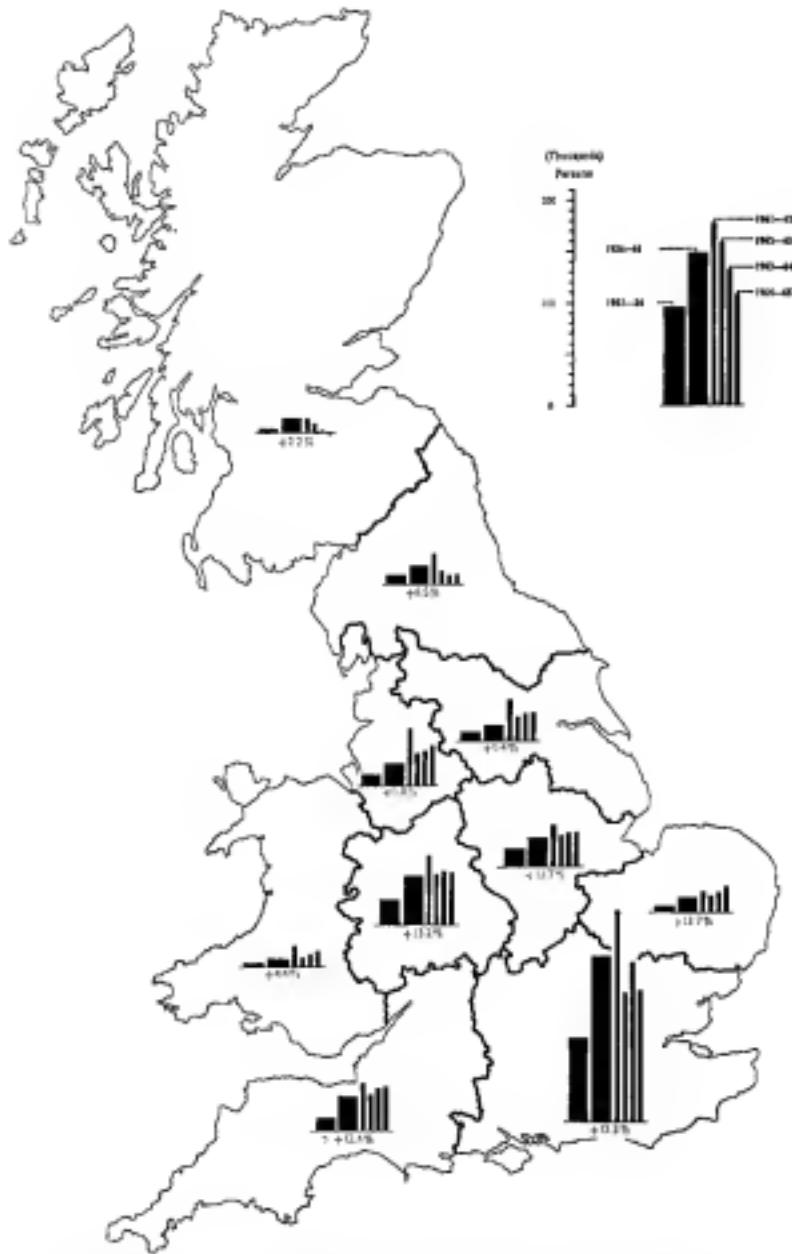


Fig. 6 Civilian Population: Total Change, Great Britain by Regions, 1951-55 to 1984-85
 The heights and widths of the columns are proportional to the mean annual total change and to the length of the period respectively. Thus, volume of change is represented by the area of the columns. Percentage growth over the period 1951-85 as a whole is given in figures. The total increase 1951-85 in Great Britain was 4,267,600 or 9.0%.

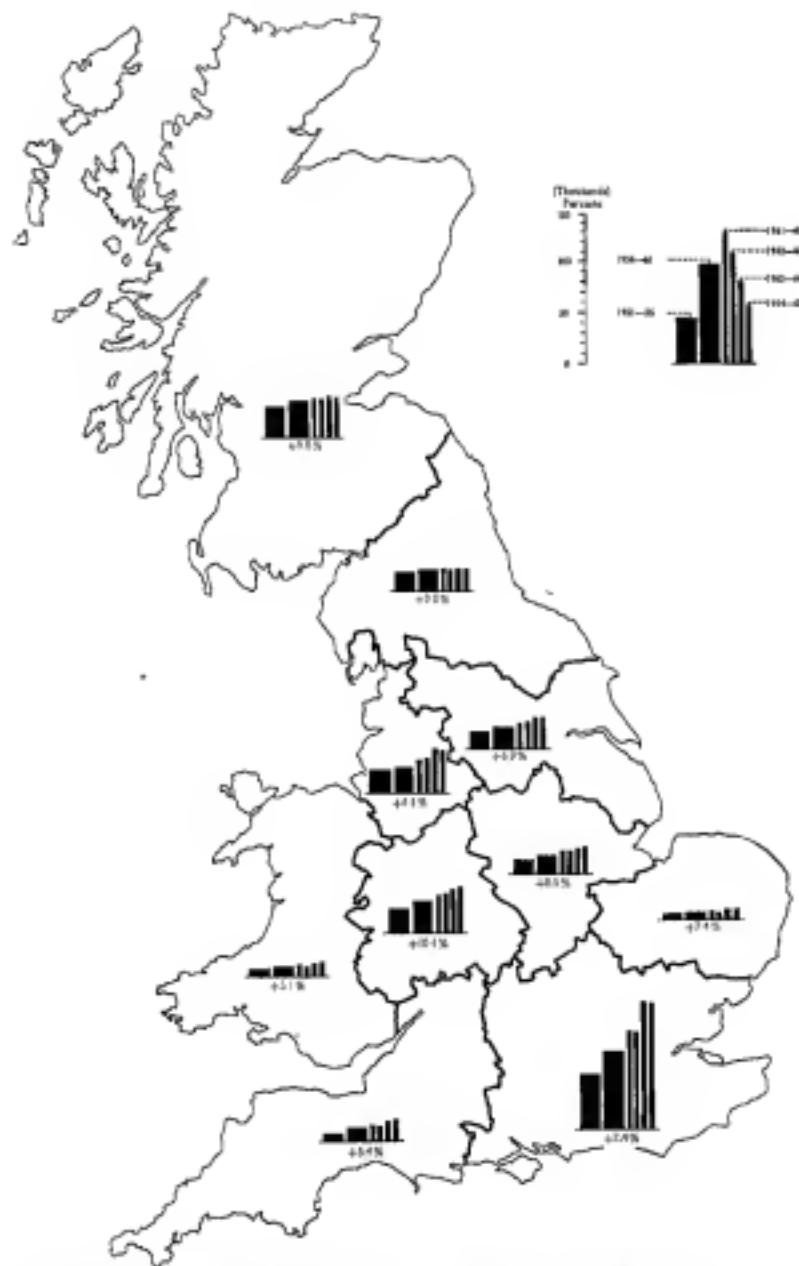


Fig. 7 Civilian Population: Natural Change, Great Britain by Regions, 1951-65 to 1966-68
 The heights and widths of the columns are proportional to the mean annual natural increase and to the length of the period respectively. Thus, volume of natural increase is represented by the area of the columns. Percentage growth over the period 1951-65 as a whole is given in figures. The total natural increase 1951-65 in Great Britain was 3,677,900 or 7.6%.

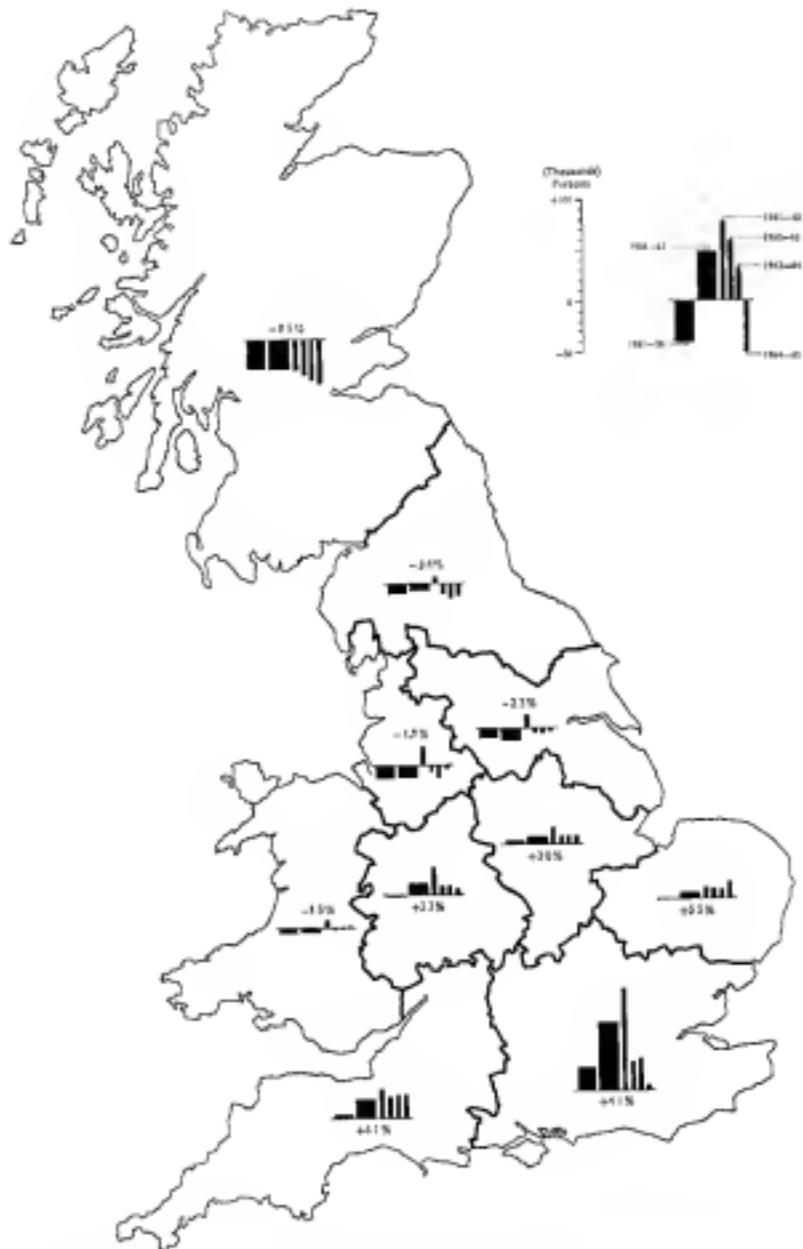


Fig. 9 Civilian Population: Estimated Net Migration, Great Britain by Regions, 1951-65 to 1964-65
 The heights and widths of the columns are proportional to the mean annual net gain or loss by migration and to the length of the period respectively. Thus, volume of net migration is represented by the area of the columns. Percentage change over the period 1951-65 as a whole is given in figures. The total net migration 1951-65 for Great Britain produced a gain of 268,000 or 0.6%.

although the age/sex composition of the population resembles the national average there is a high mortality rate, particularly from bronchitis. This suggests that a combination of sub-standard housing and atmospheric pollution may be a significant factor. The older age structure in Mid-Yorkshire must contribute to the high death-rate in that sub-division, while conversely the youthful age structure of the Yorkshire Coalfield and of North and South Humberside explains the low death-rate in these sub-divisions.

53. As a result, the rate of natural increase has varied considerably within the region. It has been highest in the Yorkshire Coalfield, where there is a young age structure and tradition of large families, and in South Humberside, where it has been influenced by the 'new town' effect of the rapidly expanding small town of Scunthorpe; and lowest in Mid-Yorkshire, influenced by an ageing population, and in West and South Yorkshire, from which sub-divisions there has been a steady loss of population. (See Appendix A8-12). The heavy outward migration from these two sub-divisions, which has included large numbers of the nubile and young married population, must be expected to influence the future natural increase of the region as a whole, since these areas together represent over half the total population.

Migration

54. Population movements are highly complex. The estimates of net migration discussed here reflect only a small part of much larger gross movements which are actually taking place at any time. For this reason great caution must be exercised when interpreting cause and effect of migration in the past, and this warning must apply with even greater force to consideration of the effect of migration on forward estimates of population.

55. Over the period 1951-65 the Yorkshire and Humberside Region, in common with Scotland and the other northern regions of England, experienced a consistent net loss of population by migration. Net outward migration has accounted for a total loss of the order of 100,000 since 1951, an average of 7,300 a year. Although this was a much smaller rate of population loss than that experienced by Scotland, it was greater than that of any other part of the country except the Northern Region of England.

56. Nevertheless, there seems to have been a change of trend during the last three years. Migration losses which averaged 9,000 a year from 1951 to 1958 and 11,000 a year from 1959 to 1961 were replaced by a net gain of 12,000 in 1961-62 (the year immediately preceding

the introduction of the Commonwealth Immigrants Act); although there has been a reversion to outward movement since 1962, losses have been at a much lower level—just under 4,000 a year (see Appendix A13). As a result, the region has retained a much larger proportion of its natural increase than in preceding years. Undoubtedly this change in the previous trend must be partly due to the effect of Commonwealth immigrants; nevertheless it is considered to be a significant change, and account has been taken of it in the estimates of future population changes.

57. Three types of population movement contribute to the net effect of migration and must so far as possible be distinguished in an account of the population structure of the region and its sub-divisions. These are:

- a internal re-distribution of population;
- b inter-regional movements;
- c international movements.

58. The following paragraphs attempt to assess the net effect of these movements on the sub-divisions of the region. They relate to the period 1951-65. There has been a change in migration in the latter part of this period and this current trend has been accepted—for lack of any more certain guide—as a starting point for estimates for the future.

West Yorkshire

59. There has been little change in migration trends in West Yorkshire since 1951, except in the year or so immediately preceding the introduction of the 1962 Commonwealth Immigrants Act, when there was a net gain to the sub-division by migration. This was in contrast to the general trend of net emigration which averaged a loss of some 4,000 people a year in the 1950s and rose to 6,000 per annum between 1962 and 1966. There was migration from all the county boroughs except Huddersfield, and from many of the congested towns throughout the period. In general, the migration from the western part of the sub-division was greater than that from the eastern part, and evidence points to a continuing net outward movement from the smaller Pennine communities. A proportion (which cannot be accurately assessed) of the migration from the conurbation must have been due to voluntary movement to Harrogate, Knaresborough and parts of Wetherby Rural District and even to areas in the Coalfield sub-division, such as Garforth and Pontefract, where private housing has been developed on a substantial scale in recent years; such movement would, of course, have no effect on the population figures for the region as a whole.

South Yorkshire

60. This is the only sub-division in which

outward migration has been sufficiently large to offset, almost wholly, the natural increase of population, giving no more than a marginal total increase since 1951. Nevertheless these figures must be recognised as misleading, since much of the outward movement has been to north-east Derbyshire, across the regional boundary. Although they are resident outside the region and sub-division (as now defined) many of these people remain in employment in Sheffield.

Yorkshire Coalfield

61. In the Yorkshire Coalfield sub-division, net outward migration has come to a halt in recent years, although some internal movement continues from the Barnsley-Doncaster area eastwards towards Doncaster. To some extent the position has been effected by the movement of miners and their families into the area from Scotland and Durham; the White Paper on Fuel Policy (Cmnd. 2798, November 1965)

suggests that this movement is likely to continue.

Mid-Yorkshire

62. The trend of inward migration into the Mid-Yorkshire sub-division increased considerably in the latter half of the period 1951-65, despite some loss of population from the remote rural districts and some voluntary movement from York over the boundary of the region to Flaxton Rural District in the North Riding. Hemlington, Knaresborough and the 'retirement area' of Bridlington in particular have experienced an inward movement of population.

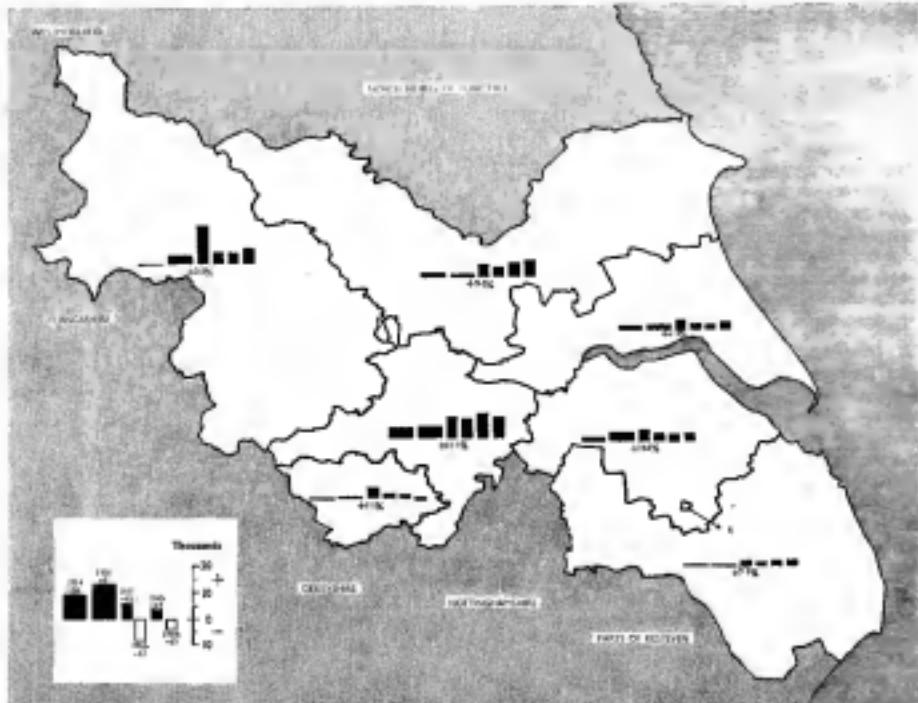
North Humberside

63. The North Humberside sub-division has suffered from a relatively heavy migration loss, which has diminished only slightly in the last few years. The movement out of the sub-division (10,800 net in 1956-65) has been

Fig. 3. Civilian Population: Total Change, Yorkshire and Humberside by Sub-Division,

1951-65 to 1964-65

The heights of the columns are proportional to the mean annual total change. Percentage growth over the period, 1951-65 is given in figures. The total increase 1951-65 in Yorkshire and Humberside was 240,000 or 5.4%.



accompanied by internal re-distribution on a considerable scale, as large numbers of people have moved out of Hull into the adjoining county districts, particularly Haltcliffe Urban District.

South Humberside

64. There was a net migration gain to South Humberside during the period, most of this taking place in the late 1950s. Two separate movements can be identified: that into the steel town of Scunthorpe, which came mostly from outside the sub-division and probably partly from outside the region; and that into Grimsby Rural District, which came mainly from the adjoining county borough.

South Lindsey

65. In the remaining sub-division, South Lindsey, which is essentially rural in character, there has also been a net inward movement in recent years. Local pockets of steady net movement from the rural districts continue to

affect the overall position, as in all the remoter rural areas of England and Wales; but this has been more than offset by an inward movement from Lincoln City, which is outside the region, into the adjoining residential areas in Welton Rural District.

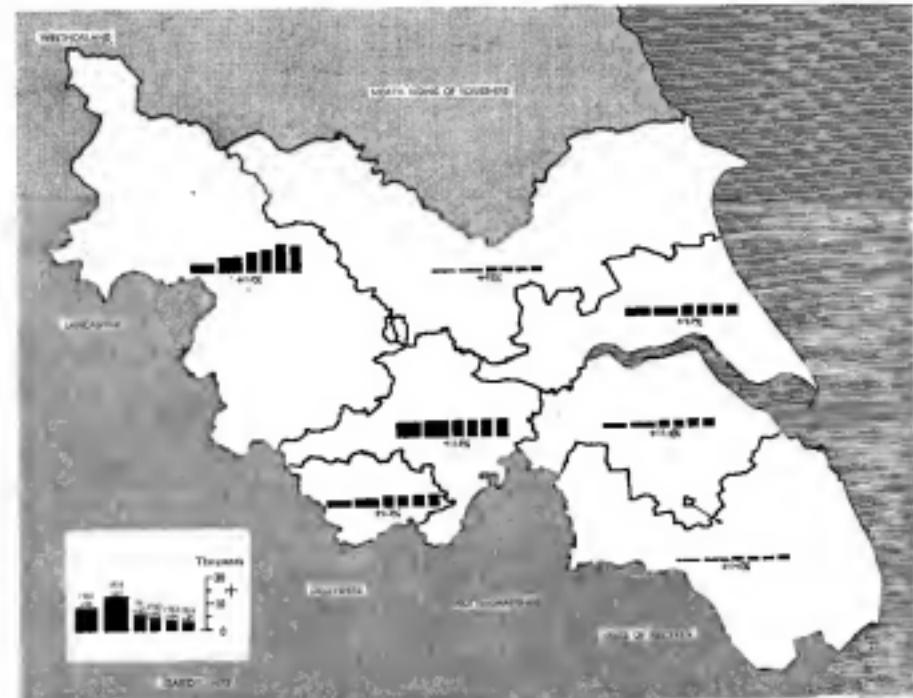
Rural Depopulation

66. These two movements, as exemplified in South Lindsey, one outward from the congested towns and the other towards the towns from the remote rural areas, account for the rapid growth on the fringes of the larger towns. This is not peculiar to this region; it is taking place everywhere. People seeking more pleasant living conditions are moving out of the older and more congested parts of the large towns to the outer suburbs and villages beyond; others seeking better services, and above all a wider choice of employment, are moving from the countryside towards the towns.

67. The process of rural depopulation has

Fig. 10 Civilian Population: Netoral Change, Yorkshire and Humberside by Sub-Divisions, 1951-55 to 1964-65

The heights of the columns are proportional to the mean annual natural change. Percentage growth over the period 1951-55 as a whole is given in figures. The total natural change 1951-65 in Yorkshire and Humberside was 305,000 or 6.9%.



occurred in the rural north-eastern and north-western parts of the region as well as in Lindsey. In Lindsey and the East Riding the full extent of the loss from the rural areas is concealed by statistics covering whole local authority areas where there has been a reverse movement of population from the towns to their rural fringes, and, in the case of Lindsey, by the growth of Scunthorpe. The north-west of the West Riding has experienced the effects of rural depopulation to the greatest degree; in this part of the region no counter-movement of population has taken place as there are no large urban areas from which people could move.

Changes in Age and Sex Composition of Population

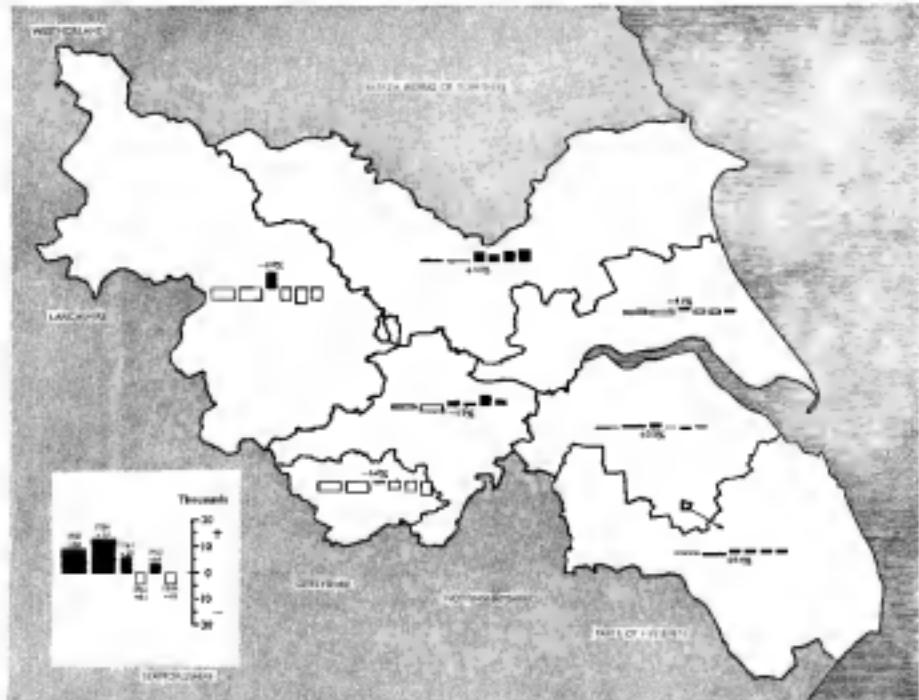
88. The foregoing discussion of migration is based on estimates of the net balance of inward and outward movements of persons of both sexes and of all ages across local authority

boundaries. These net movements reveal nothing of the much larger volume of total movement, or of the varying pattern related to age and sex; these factors are important because over a period of years they bring about changes which can have a great influence on future population growth.

89. Information on these important aspects of migration was collected for the first time in the 1961 census, when the results of a 10 per cent sample showed movement between the standard regions for the year 1960-61; it took no account of movement out of England and Wales. The information obtained showed that the gross movement into and out of the standard region (East and West Ridings) from other parts of England and Wales was ten times greater than the net balance, and that more than half the gross movement was to and from the three adjoining regions. The greatest outward movement was 11,000 to the North Midlands, but

Fig. 11. Civilian Population: Estimated Net Migration, Yorkshire and Humberside by Sub-Divisions, 1961-66 to 1964-65

The heights of the columns are proportional to the mean annual net gain or loss by migration. Percentage change over the period 1961-65 as a whole is given in figures. The total net migration 1961-65 for Yorkshire and Humberside showed a loss of 102,000 or 2.3%.



this would include people moving out of Sheffield to the adjacent areas of north-east Derbyshire. The largest movement over a greater distance was 7,000 to the South East. As might be expected it was the younger age groups who found the South East more attractive, and the 15-24 age group of both sexes was the most mobile overall. There was no significant difference between the gross movement of men and women, but in the net balance of movement the loss of women was greater.

70. Examination of net movement over the intercensal period 1961-61, including movement into and out of the country, indicates a net outward movement from the region of women in all age groups, in contrast to a net inward movement of men in the 15-24 age group; it is reasonable to assume that many of these young men were Commonwealth immigrants.

71. The pattern of migration varied considerably throughout the region, but a notable consistent feature was that all sub-divisions suffered a loss of young people of both sexes under 15 years of age, presumably because more families with children left than entered the region; this will have the effect of reducing the birth-rate in future years. Numerically the greatest loss, both of men and women, was from West Yorkshire, the largest sub-division; but in proportion to population North Humber-side lost more men and South Humber-side more women. There was a net inward movement in the 15-24 age group into West and South Yorkshire (probably including Commonwealth immigrants) and the Yorkshire Coalfield, and also into South Humber-side where the growth of Scunthorpe was an attraction. The movement of middle-aged and older people into Mid-Yorkshire reflects the popularity of the sub-division as a dormitory and retirement area.

Commonwealth Immigration

72. Between the end of the second world war and the passing of the Commonwealth Immigrants Act 1962, there was a net increase of about 660,000 in the population of Great Britain as a result of immigration from the Commonwealth, and by 1965 this figure had increased considerably. During the period 1961-61 the number of Commonwealth immigrants in the Yorkshire and Humber-side Region increased, by about 22,000, to 36,000; the number of immigrants increased considerably in the county boroughs in the West Riding, and so reduced the net outward migration figures for the West Yorkshire and South Yorkshire sub-divisions.

73. As a result of government policy in recent years there has been a substantial reduction in

the number of Commonwealth immigrants entering this country. This factor has been taken into account in preparing estimates of future population. As Commonwealth immigrants have been mostly in the younger age groups, and mostly males, a reduction in the number will have the effect of reducing the proportion of the population in the 'working age' groups.

Estimated Population Change 1964-81

74. In preparing forward estimates of population, it is necessary to assess the natural increase that will accrue during the period under review, and then to consider the extent to which this increase will continue to be affected by the various factors which in the past have operated to alter the total and the distribution of population remaining in the region.

75. Projections of population change in the region and its sub-divisions have therefore been prepared on two bases (see Appendix A16). The first assumes the retention of all the natural increase of the population existing in the region, disregarding any migration, voluntary or planned. The second assumes that the growth of population in the future will continue to some extent to be affected by migration. The figures which emerge may be regarded as very broad indications of the upper and lower estimates of population changes in the region. They do not attempt to anticipate or take account of decisions (at national and regional level) affecting future development.

Estimated Natural Increase

76. The natural increase projections used in this review are controlled by a projection of total population of England and Wales made by the Government Actuary in 1964. They are based on age structures derived from the 1961 census and take account of migration until mid-1964 but not after that date. The Registrar General has provided projections of civilian population by economic planning regions and from these the anticipated natural increase of the sub-divisions has been derived.

77. The estimated natural increase likely to occur in the Yorkshire and Humber-side Region between 1964 and 1981 is 660,000. This would bring the total population of the region to 6.3 million in 1981, a rate of increase considerably greater than that experienced in the recent past, but in keeping with the rate of increase expected in the country as a whole.

Adjustments for Migration

78. The pattern of migration in the latter part of the period 1955-65 is markedly different from earlier years and, in keeping with national thinking on future regional migration, the trend which occurred in the years 1962-65 has been adopted as the basis for assumptions regarding migration in the future. In addition to this continuation of voluntary migration from the region some adjustment is necessary for the rehousing of Sheffield population in an area beyond the present regional boundary. The first projection, based on natural increase alone, has therefore been modified to take account of these factors.

79. Gross movements of persons into and out of the region can affect the age/sex structure of the population and therefore its projected natural increase. It is estimated that if migration continues, these gross movements will have the effect of reducing the natural increase by some 32,000 persons and migration estimates have therefore been increased accordingly.

80. Another factor which is unlikely to continue at past rates is the immigration of persons from outside England and Wales, particularly from the Commonwealth. The migration assumptions have been further modified to take account of this. This reduction is particularly significant as most of these immigrants would have been of working age.

81. On the basis of these assumptions about migration, the natural increase of 650,000 in the region's population by 1981 would be reduced by some 135,000 persons, representing 2.0 per cent of the 1984 population. The estimate of the increase in the total population of the region would therefore become 615,000: from 4.7 million in 1984 to 5.2 million in 1981. This represents an increase of 30,000 per annum, nearly twice the average of 17,000 a year between 1951 and 1965.

Internal Redistribution

82. Estimated changes within the region are considerably influenced by migration, but in all the sub-divisions, other than South Yorkshire, the estimated natural increase is greater than the estimated net outward migration. Conse-

quently all the sub-divisions but one show an increase of population by 1981.

83. The first projection, based on natural increase alone, shows a high rate of growth in the Yorkshire Coastfield and in North and South Humberside. However, because it represents a large proportion of the regional total, the West Yorkshire sub-division (and particularly the conurbation) will experience the greatest rise in population in terms of numbers.

84. When the projection is modified to take account of migration, the rate of growth of South Humberside is increased by 7 per cent to 28 per cent, much the highest in the region. In Mid-Yorkshire the effect of inward migration is to more than double the expected natural increase, while in the Coastfield the position remains virtually unchanged. The overall effect of the expected internal population movement is to disperse population more evenly throughout the region, with outward movement particularly marked from West Yorkshire and South Yorkshire. In the latter case, however, much of the movement must be expected to take place into north-east Derbyshire.

Conclusions

85. Although these forward population projections must be treated with caution, they nevertheless provide the broad framework within which the economic, physical and social problems of the region must be considered. Both sets of projections imply a higher rate of increase than has occurred in the recent past. Consequently a high demand for land must be expected.

86. Population trends indicate that in common with the rest of the country most of the expected increase in population will consist of older people and children, the dependent age groups. Analysis of the age/sex composition of the population of the region in 1951 and 1981 (see Appendix 8), suggests that in this region, if migration continued, these effects would be more marked. This implies a decrease in the proportion of the population of working age, which must have serious implications for planning for a faster rate of economic growth in the region and which becomes even more important looking ahead to the prospective rising of the school-leaving age.

3 Industry and Employment

87. The preceding chapter has considered the region's population and the past and likely future trends. As in the rest of the country most of the expected increase in population will consist of older people and children, but the indications are that the effects may be more marked in this region. The implications of this for the supply of manpower for industrial expansion in the region could be serious.

88. The next four chapters examine the region's industries. This is done mainly in terms of manpower supply and demand about which information is more readily available, but the Council wishes to emphasise that economic growth in the region will depend in large measure on improved techniques and more efficient use of the labour force available. It is concerned, too, with the encouragement of capital intensive industry in the region.

89. The industries of the region extend over a much wider range than is sometimes assumed. This is shown clearly in Table 2 which sets out the 1965 distribution of the region's manpower between the various industrial groups, compared with the national distribution. Figure 17 compares diagrammatically the regional and manpower trends in each of these groups over the period from 1963 to 1965. (See also Figure 16, and Figure 18 in pocket.) The figures bring out clearly that the Yorkshire and Humberside Region has a relatively high proportion of its employed people in the primary and manufacturing industries. The primary industries, namely, agriculture, forestry and fishing, and the mining and quarrying industries, provided employment for 7.7 per cent of the working population compared with a national figure of 4.8 per cent. The manufacturing group accounted for 43.1 per cent of the regional total compared with a national percentage of 38.2.

90. On the other side of the picture the region's construction industries employed 6.7 per cent against a national proportion of 7.2 per cent,

and the services group 42.6 per cent, which was significantly lower than the 49.8 per cent for the country overall.

91. More recent trends suggest that the regional pattern has moved somewhat towards the national one. The proportion of employment in the primary and manufacturing industries in the region fell by 8.1 per cent between 1963 and 1965 and by only 4.5 per cent in the country overall. Nevertheless, the region has advantages which favour the primary and manufacturing industries and it is likely that these groups will continue to provide a higher proportion of employment in the region than they do in the country as a whole.

92. It will be seen from Table 2 (page 24) that, relatively, the dependence for employment is greater regionally than nationally on the following groups:

Percentage of total employment

	Yorkshire and Humberside	Great Britain
Mining and quarrying— almost wholly coal mining	5.9	2.7
Textiles— primarily wool textiles	8.9	3.3
Metal manufacture— mostly steel production	5.9	2.7
Clothing and footwear— mostly clothing	2.6	2.3
Food, drink and tobacco production—very largely food and drink	3.8	3.5

These five groups together account for 27.3 per cent of total employment in the region as against only 14.5 per cent in Great Britain.

93. Figure 17 also shows the employment

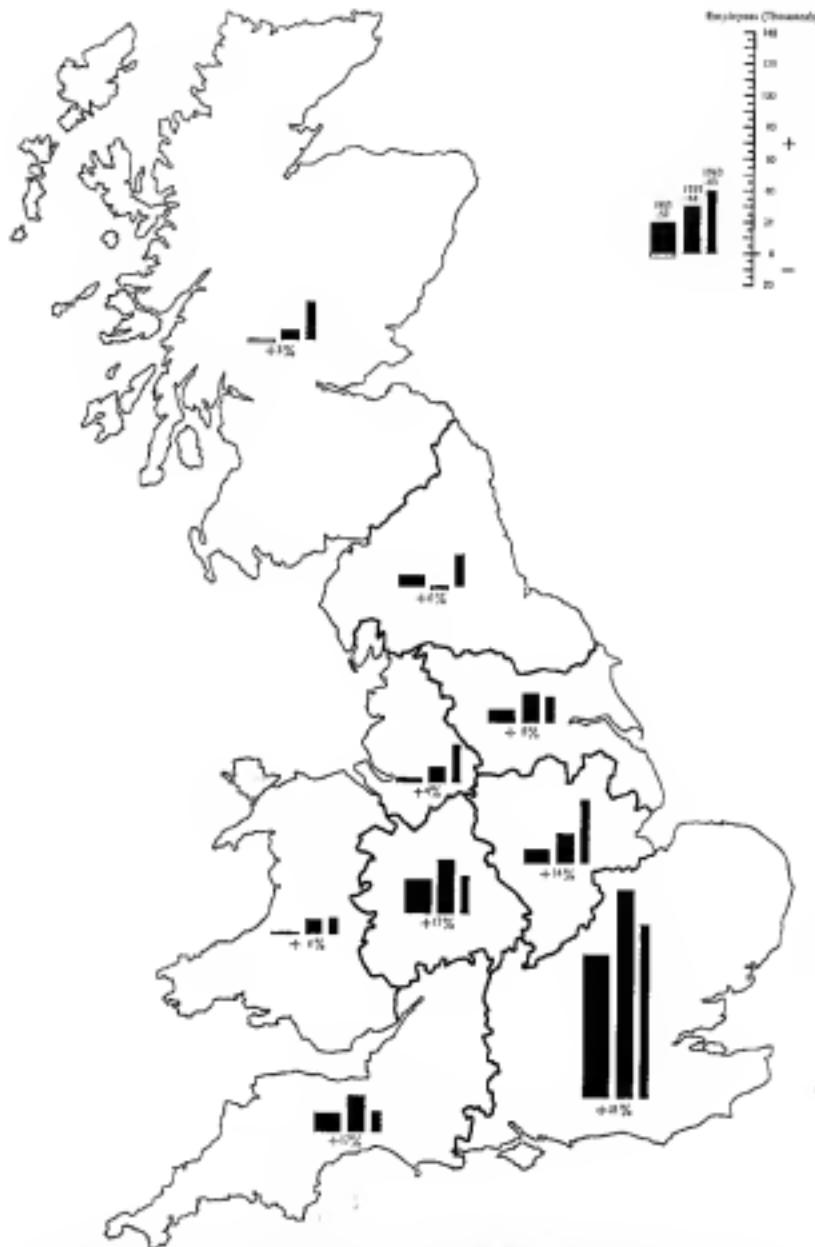


Fig. 15. Employment: Total Change, Great Britain by Regions, 1963-65 to 1963-66
 The heights and widths of the columns are proportional to the mean annual changes in estimated numbers of employees employed at mid-year end to the length of the period respectively. Thus, volume of total change is represented by the area of the columns. Percentage growth over the period 1963-65 as a whole is given in figures, but owing to changes in the method of calculation as well as to regional boundaries, they are only rough estimates and are therefore shown to the nearest whole number. The total increase 1963-65 in numbers employed in Great Britain was about 2,838,000 or 12.3%.

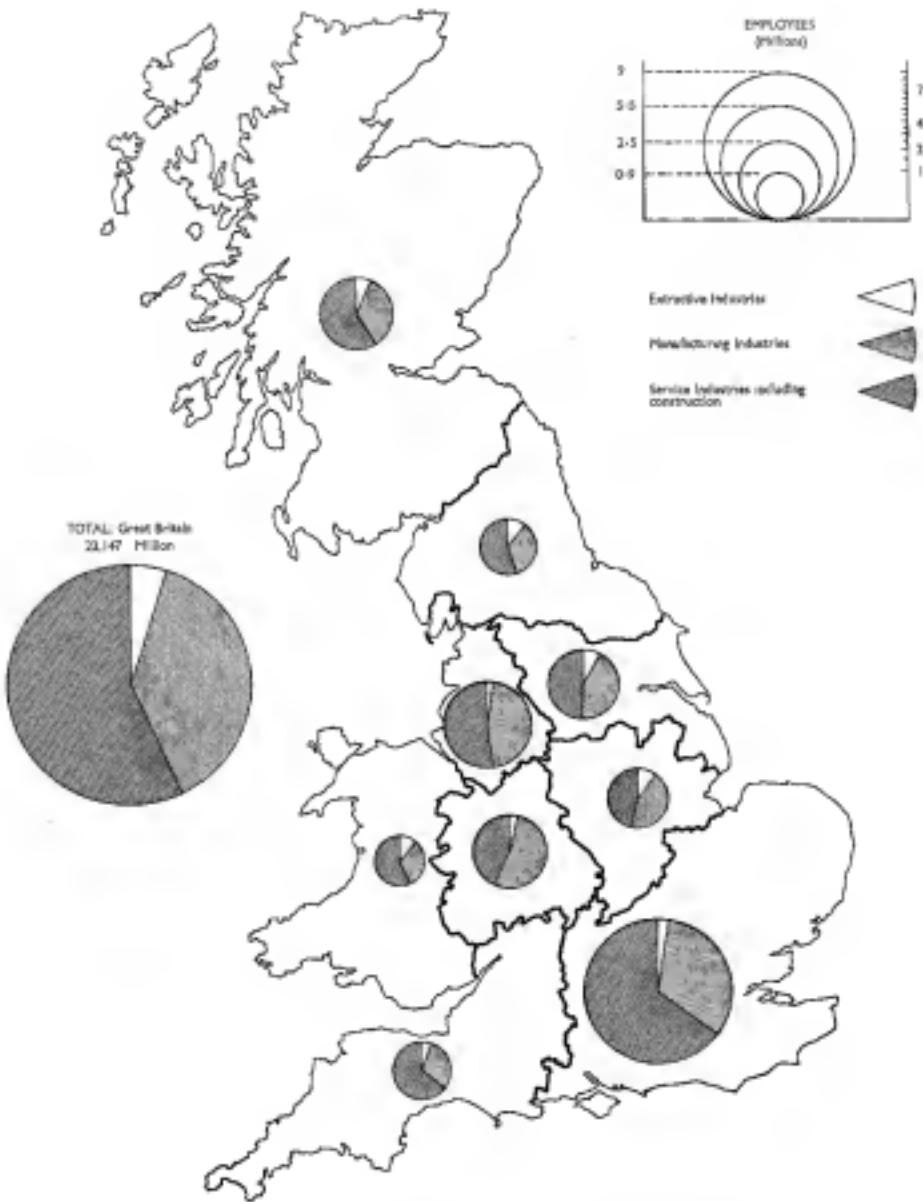


Fig. 16 Employment Structure: Great Britain by Regions, 1986
 The size of the circles represents the total number of employees employed. The sectors show the distribution between three broad industrial categories.

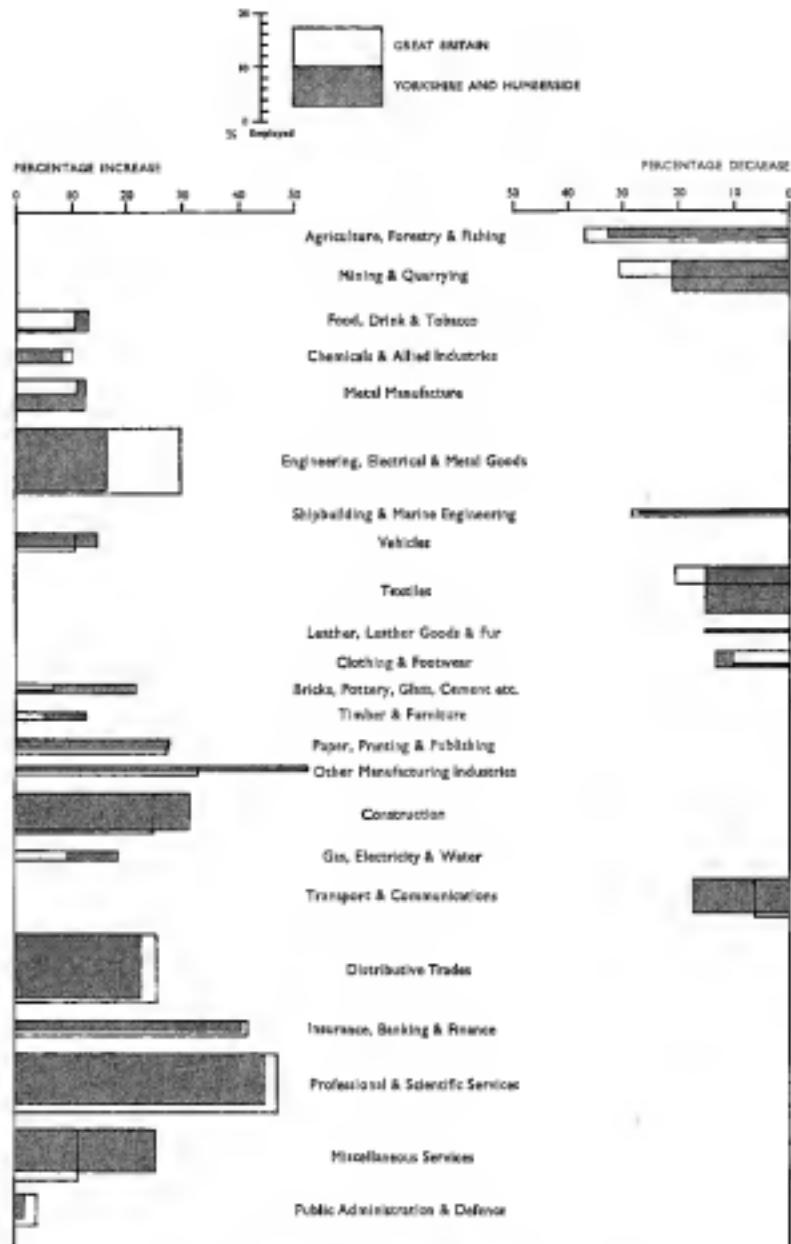


Fig. 17 Employment Changes, 1963-65, and Distribution, 1965: Great Britain and Yorkshire and Humberside

The heights and widths of the bars are proportional to the numbers employed in each industry and the percentage changes respectively.

trends in these industry groups compared with the national trends (see also Appendix A16, 17, and 18). Over the 1953-65 period, employment declined in mining, textiles, and clothing and footwear, but in the case of mining and textiles more slowly in the region than nationally.

94. In the food and drink, and metal manufacture groups, employment increased and did so regionally at a faster rate than nationally.

95. There is a wide range of industry groups on which the region is relatively less dependent for employment. Of these, employment decreased in agriculture, forestry and fishing, but less in the region than nationally, and in transport and communications, in which the regional decline was proportionally greater.

96. Of those groups in which employment increased, the regional rate of increase was above the national in vehicles, construction, gas, electricity and water and in the group of miscellaneous service industries. But in engineering, distribution, public administration and the professional and scientific service sectors, the regional rate of expansion of employment was less.

97. The region's employment pattern is thus a complex one and changing. There are, however, general points which should be noted:

- a employment growth has been slower regionally than it has been nationally (which reflects the relatively slow growth of the working population of the region);
- b of the industries on which the region is relatively more dependent, mining and textiles have been reducing manpower, but the regional reductions have been significantly below the national rate;
- c with the exception of metal manufacture, and food, drink and tobacco, the main industrial groups in which employment has been increasing over the years are those in which the region, in terms of employment, is under-represented. In some of these, growth has been faster than nationally, but the large engineering, distribution and professional services groups have been growing more slowly.

Industries in the Region

Coal Mining

98. Coal mining is vitally important both nationally and regionally, and indeed dominates, and is likely to continue to dominate, the industrial scene in some parts of the region.

99. The Yorkshire Division of the National Coal Board is second in output only to the East Midlands Division, producing nearly a

quarter of the country's coal supply, a proportion which it is aimed to step up. Advances in mechanisation and productivity have enabled production to be kept up in spite of the fall in manpower which has been taking place over a long period.

100. The proved area of the Yorkshire Coalfield extends from the Pennine slopes near Bradford, Huddersfield and west of Barnsley, eastwards towards Selby, Thorne and Bawtry. The more easily worked mines to the west have, however, been largely exhausted and the industry has moved eastwards to seams which, though deeper, are larger and can be economically worked.

101. The industry comprises in the main large units employing 1,000-3,000 men mainly in the districts of Barnsley, Castleford, Mexborough, Rotherham, Wakefield and Doncaster. Coal mining is the major industry in the Barnsley and Mexborough districts, and a substantial employer of manpower in the Castleford area. In all the coal mining districts there are towns and large villages where mining is virtually the sole local source of employment for male labour, leaving aside the service industries.

102. The coal mining industry is more fully described in Chapter 6.

Agriculture

103. Agriculture is an important industry in the region, including arable farming, stock rearing, dairying and horticulture. Farms vary widely in type, ranging from small hill holdings in the Pennines to very large farms, employing a substantial labour force, in the East Riding and in Lindsey, where some of the best agricultural land in the whole country is found. Altogether there are about 30,000 agricultural and horticultural holdings in the region. There is a growing link of some significance with the manufacturing industries, i.e. in fruit and vegetable canning, barley malting and the manufacture of milk products.

104. It is anticipated that the agricultural industry in the region will continue to reduce its labour force while increasing productivity and output. Appendix C gives some fuller indications of the considerable progress which the industry has already achieved in stepping up its productivity in the region.

Fishing

105. The fishing industry is of particular importance to two places in the region, Hull and Grimsby, which are the country's major fishing ports. More than two-thirds of the big fishing vessels (80 ft. and over) are registered in this region, and nine-tenths of the 'distant water' fleet (over 140 ft.). Employment has been reduced as a result of modernisation.

TABLE 2

Distribution of Employment in Yorkshire and Humberside and Great Britain, 1965

Industrial Order	Yorkshire and Humberside			Gt. Britain	
	Number employed 1965 (thousands)			Percentage of Total Employment	Percentage of Total Employment
	Males	Females	Total		
Agriculture, Forestry and Fishing	39.8	4.8	37.9	1.6	2.1
Mining and Quarrying	116.1	3.6	122.6	5.9	2.7
TOTAL: PRIMARY INDUSTRIES	152.4	8.4	160.5	7.7	4.8
Food, Drink and Tobacco	41.7	37.8	79.5	3.6	3.6
Chemical and Allied Industries	33.1	11.7	44.8	2.2	2.2
Metal Manufacture	109.2	15.7	122.9	5.9	2.7
Engineering, Electrical and Metal Goods	171.6	59.3	230.9	11.1	12.3
Shipbuilding and Marine Engineering	7.6	0.3	7.9	0.4	0.5
Vehicles	38.9	7.8	42.2	2.3	3.7
Textiles	86.2	69.6	155.8	8.6	3.3
Leather, Leather Goods and Fur	4.1	2.1	6.2	0.3	0.3
Clothing and Footwear	14.8	43.4	58.2	2.6	2.3
Bricks, Pottery, Glass, Cement etc.	29.6	8.8	38.2	1.7	1.6
Timber, Furniture etc.	21.4	5.4	25.8	1.3	1.3
Paper, Printing and Publishing	22.7	14.3	37.0	1.8	2.7
Other Manufacturing Industries	7.2	5.4	12.6	0.6	1.4
TOTAL: MANUFACTURING INDUSTRIES	596.6	236.8	832.7	43.1	38.2
TOTAL: CONSTRUCTION	132.9	8.6	139.7	8.7	7.2
Gas, Electricity and Water	34.1	4.2	38.3	1.6	1.6
Transport and Communication	107.3	18.4	125.7	8.0	7.0
Distributive Trades	116.7	132.6	247.3	11.9	12.8
Insurance, Banking and Finance	19.1	17.4	36.5	1.6	2.6
Professional and Scientific Services	58.4	134.3	192.7	6.8	10.4
Miscellaneous Services	64.6	92.0	157.4	7.6	9.4
Public Administration	61.1	23.1	84.2	4.1	5.8
TOTAL: SERVICE INDUSTRIES	459.3	422.8	882.1	42.6	49.8
GRAND TOTAL	944.0	727.0	2,061.0	100.0	100.0

NOTES:

1. Information about these estimates is given in the Statistical Appendix (paragraphs 16-20).

2. Totals do not agree with the resultant page because of rounding.

Textiles

106. It is unnecessary to underline the importance to the region of the textile industries. They provide substantial employment and are located mainly in the north-western part of the West Riding, with Bradford as their centre. Since the second world war, some new undertakings have been established outside the traditional areas including newcomers from the Midlands, and during that time large new man-made fibre plants have been established in Doncaster and near Birmingham.

107. The cotton industry is established in the region and is of particular importance in Todmorden, Barnoldswick and Skipton.

108. By far the major element is the woollen and worsted industry in which the region accounts for nearly three-quarters of the total national employment in the industry.

109. The woollen and worsted industry presents a complex interlocking structure. Traditionally, the industry is the stronghold of the small family enterprise and there is a long-established tendency for the number of firms to diminish, attributable to a number of factors including the high cost of new capital equipment and the increasing use of man-made fibres. Public companies are now responsible for roughly half the industry's output. But none of these is of giant size and the twenty largest still operate only some 150 out of the 750-800 mills in Yorkshire and account for little more than a quarter of the total employment in the industry.

110. Except during the recessions of 1951-52 and 1958, the industry has been short of labour throughout most of the period since the second world war, although the use of Commonwealth immigrant workers has helped to ease the shortage of men. Younger entrants have not been attracted in sufficient numbers and the age level is high.

111. It is hazardous to forecast to what extent the slow but long-maintained decline in the industry's labour force will continue. A great deal will depend on the growth of productivity, the wider adoption of more up-to-date methods of production, and on changes in the raw materials used. But the future of overseas demand for the industry's products is a factor of special importance to an industry which, despite many obstacles, has sustained exports at roughly 25 per cent of its output.

112. Closely dependent on the wool textile industry is carpet manufacturing, mainly in the hands of some five large firms, several of which also own plants elsewhere in the country. It is organised in large units which tend to be vertically integrated but often draw

their supplies, particularly of yarn, from many outside sources.

Clothing

113. There is a substantial clothing industry, comprising units of all sizes and reflecting different degrees of integration. They range from small establishments specialising in a single item of clothing to some ten large companies or groups at the other end of the scale, some of whom own their own shops nation-wide. Many of the individual factories employ more than 1,000 workers. The traditional centres of the industry are Leeds, Halifax and Huddersfield, but the scarcity of female labour in these areas throughout the post-war period has been one of the causes of the decline in employment and has resulted in some dispersal to the coal mining areas of South Yorkshire as well as to the Northern Region of the country.

Steel and Non-Ferrous Metals

114. The steel industry in the region employs about one-third of the industry's manpower in the country as a whole and produces nearly a quarter of the country's steel, including about two-thirds of its special steel.

115. The Sheffield area is best known for its alloy steels, although it contains two large plants producing predominantly bulk steel. The main distinguishing features of its industry are first the absence, with one exception, of any integrated plants and consequent reliance on outside sources for steel scrap and pig iron and, secondly, the large number of relatively small firms, many of them producing only low tonnages of steel in their furnaces and often combining steel-making with various forms of engineering. The steel industry in the Sheffield area thus represents a complicated nexus of firms of all sizes linked closely one with another and making a wide range of steel products from the heaviest of castings to items of cutlery. The region therefore has a relatively high proportion of what, for the steel industry, are units of modest size. Nevertheless its plants are large compared with those of other industries, whether the criterion is employment, capital employed, or value of output. In Sheffield, Rotherham and Stockbridge there are eleven plants each employing more than 1,000 workers, and some of them employ several times this number. The total labour force in the area is some 72,000 and its planned ingot steel-making capacity for 1970 is over 4 million tons a year.

116. By contrast with Sheffield, Scunthorpe contains only three integrated works and one foundry. The blast furnaces are mainly fed with local or Northamptonshire ore. Some

high grade foreign ores have been used, and plans to use a much higher proportion ore being discussed. The three integrated plants together employ some 22,000 workers and produce mainly heavy steel in a variety of forms, including semi-finished products for further processing elsewhere. Output is expected to reach 3.5 million ingot tons by 1970.

117. Another sector of iron and steel production is found in parts of West Yorkshire and the Yorkshire Coalfield, especially in Leeds, Bradford, Barnsley and Doncaster. This is mainly concerned with alloy steel and small castings and forgings, especially for the motor vehicle industry. About 12,000 people are employed.

118. Taking the region as a whole, there has been considerable capital expenditure in the steel industry over recent years, both on new plants and the extension of existing ones embodying the latest advances in technology, particularly in automatic control, and leading to substantial increases in productivity.

119. The production of non-ferrous metals is long established in the Leeds district and plays an important role as supplier to engineering and other industries.

Metal-Using Industries

120. The largest sector of British industry is the metal-using industry, which provides roughly two out of every five jobs in manufacturing in the country.

121. The group covers a wide range of engineering, as well as shipbuilding, vehicles, and the production of all kinds of electrical and metal goods. Engineering itself covers a very wide range of production, and the manufacture of capital goods, i.e. machine tools (Halifax and Keighley), textile machinery (in various West Riding towns), mining and earth moving machinery (Wakefield and Hull), and printing machinery (Leeds), as well as the production of electrical motors (Huddersfield), and engineers' tools and cutlery (Sheffield), is important in the region. But the more rapidly expanding industries such as office machinery, scientific instruments, radio and electronic equipment, telegraph and telephone equipment, are not so prominent, although tractor production, which is one of the expanding industries, is well established in the region (Huddersfield, Bradford and Doncaster). The vehicle industry also includes two major aircraft factories (air frames at Brough and aero-engines at Birstall) and the manufacture of railway equipment (York and Doncaster) in addition to a number of motor vehicle component firms. Overall employment in these metal-using industries has expanded

quite quickly but at little more than half the national rate.

Food Industries

122. There has been considerable expansion of the food industries in Grimsby, Hull and Sheffield, based on new freezing and packaging techniques which have developed rapidly since the second world war; while chocolate and sugar confectionery production has been long established in various parts of the region, especially in York.

Chemical and Other Manufacturing Industries

123. The chemical industries are also well represented in the region. In the West Riding, with its long-established link with textiles, the largest plants manufacture mainly dyestuffs and other inorganic chemicals. Some of the plants are old and, in recent years, large sums have been spent in modernising them and concentrating production in the better units. Another significant development has been the formation of the oxygen grid in the Sheffield area to meet the growing requirements of the steel industry.

124. By far the most spectacular developments in the chemical industry have been on Humberside, on both banks. At Sefton on the north bank there has been a large expansion in the production of industrial alcohol and its derivatives. The south bank has attracted large-scale and varied development in the production of fertilisers, man-made fibres, petro-chemicals, titanium dioxide and pharmaceuticals.

125. The region seems certain to see further expansion of the chemical industry on Humberside. The development of North Sea gas, which has potential for use as a feedstock in chemical processes as well as a fuel, is likely to be an added stimulus. The industry is, however, capital intensive and will not make great calls on labour resources.

126. Table 2 shows the wide range of other manufacturing industries, employing altogether over 120,000 people.

Construction

127. The region's construction industry made a most striking advance between 1959 and 1963, resulting in part from large scale construction projects in the region—steel works, docks, power stations and roads. Some further advance may take place in the next six years given the large scale prospective construction of electricity generating stations and oil refining projects, the M1 and M62 motorways, as well as increased general building demands. Additional information about the industry,

bearing particularly on its ability to meet the future construction needs of the region, is given in Appendix D.

Service Industries

128. Service industries represent 42.5 per cent of total employment in the region, compared with 49.8 per cent in the country as a whole. The distributive trades form the largest sector, with professional and scientific services second. In all save the gas, electricity and water group, the regional distribution of employment in service industries is lower than nationally, significantly so in insurance, banking and finance and in miscellaneous services. Apart from a big contraction in transport and communications (road passenger and port services as well as railways) employment has expanded in all service industries, very rapidly in most of them; but the rate of growth was faster than nationally only in the public utility sector (due to new power stations) and in miscellaneous services (due to expansion of motor repair, hotel and catering and hairdressing services).

Unemployment and Unfilled Vacancies

129. The preceding paragraphs have looked at the broad industrial structure of the region and compare the rises and falls in regional manpower with the national trends. It is interesting to note that manpower has gone up and down with the national trends, but there have been wide discrepancies between the regional and national rates of change. The region in some industries has moved more quickly than the national trend; in others more slowly.

130. To look now at the net results in terms of unemployment and employment vacancies: overall, unemployment has not been a problem in the region in the past ten years. The monthly average rate of unemployment has varied between 15,000 in 1965 (0.7 per cent) and 42,000 (2 per cent) in 1963. Figure 18 (in pocket) shows the region's unemployment rate has been consistently a little below the national rate, moving slightly nearer to it in the recession periods of 1968-69 and 1962-63, and being furthest away in the boom periods of 1955-56 and 1961.

131. Over each of the past twelve years unfilled vacancies for women notified to employment exchanges have exceeded the numbers registered as wholly unemployed. In more than half the period this was also the case for men, though the shortage has been consistently less acute for men than for women. The statistics, however, do not give the whole picture. There are always more vacant jobs than there are vacancies notified to employment

exchanges. Those unemployed do not in most cases match the jobs which are vacant.

Activity Rates

132. An important element in the supply of manpower is the activity rate, which is the total number of employees (employed and unemployed) expressed as a percentage of the home population aged 16 and over.

133. Figures which are available (see Appendix A20), relating only to the East and West Ridings, show that the activity rate in the region has been above average for at least the past twelve years. In 1964 the male activity rate was the highest of all regions except the Midlands. Activity rates in Lindsey are somewhat lower than in the East and West Ridings.

134. Activity rates for females have, however, been only marginally higher than the national figure. There are differences between female activity rates in various parts of the region; it has long been the custom of the West Yorkshire textile areas for married women to go out to work, but this tradition is not so strong elsewhere in the region.

Migration of Manpower

135. In general, therefore, the region has absorbed its manpower, although there are potential reserves of labour, especially of women, in certain parts of the region. Nevertheless the region has lost some manpower because more workers have moved out of it than have moved in.

136. It is possible to estimate the loss of manpower by looking at figures derived from the annual 1 per cent sample from national Insurance records. Calculations based on such a small sample are clearly open to some error, but the results based on the sample agree by and large with the details of regional migration discussed in Chapter 2.

137. The figures (see Appendix A21, 22 and 23) relate to the East and West Ridings only, but this is where the problem mainly arises since Lindsey has had a net immigration. The statistics suggest that about 52,000 workers per year moved out of the East and West Ridings, and 48,000 moved in during the period 1954-64; a net loss of about 4,000 per annum. This may represent only 0.2 per cent of the number of employees, but the loss has been going on for a very long time, and between 1954 and 1964 would have amounted to a total of about 38,000. The indications are that during the last five years the net loss

has been at a lower rate than previously, but that the overall outward trend has not been reversed.

138. Half the gross total movement of employees was between the East and West Ridings and the adjacent Northern, North West and North Midland Regions. Some of this, and perhaps much of it, may not represent a loss of labour; for example near Sheffield, workers who take jobs just over the regional boundary, even without changing residence, are counted as migrants. But by far the largest net loss was to the South East. The largest net gain into the region was from the Northern Region, although there was a small gain from Scotland. A higher proportion of those moving were, as was to be expected, in the 20-44 age group, and the age groups were much the same both for those moving out and coming in. Since it is (in general) skilled and trained people who tend to move, the real loss to the region is probably higher than the net loss of 38,000 mentioned above.

Other Economic Indicators

139. The region's long record of relatively low unemployment and high activity rates might indicate a healthy industrial situation if it were not for three facts which suggest that the

economic pace of the region is not as fast as it could be:

- the small but persistent loss of manpower by net migration;
- the relatively heavy dependence of the region on older industries in which employment has been contracting and where both a faster rate of contraction and increased output might result from a higher rate of investment in the future;
- the relative under-representation in the region of some of the new industries, especially in the engineering sector.

140. It is important, therefore, to look further than manpower trends, which have been discussed in the previous paragraphs.

Net Output

141. The 1958 Census of Production revealed that net output per person employed in manufacturing industries in the East and West Ridings was 8 per cent below the national average (see Table 3) and a comparison of information for previous census years from 1948 onwards shows that in each of the intercensal periods the rate of growth of net output per person employed was comparatively slow in the region (see Appendix A24).

TABLE 3
Value of Net Output Per Person Employed in
Manufacturing Industries, Great Britain, East and West
Ridings, 1958

Standard Industrial Classification Order		Great Britain	East and West Ridings
No.	Title	Value of Net output per person employed	Net output per person employed*
III to XVI	Total Manufacturing	£ 1,613	Index: GB = 100 82
III	Food, Drink, Tobacco	1,266	63
IV	Chemical and Allied Industries	1,696	66
V	Metal Manufacture	1,213	60
VI, VII, VIII, IX	Engineering and Electrical Goods, Shipbuilding and Marine Engineering, Vehicles, Metal Goods N.E.S.	986	86
X	Textiles	726	109
XI	Leather, Leather Goods, etc.	792	96
XII	Clothing and Footwear	667	66
XIII	Bricks, Pottery, Glass, etc.	876	109
XIV	Timber, Furniture, etc.	851	66
XV	Paper, Printing, Publishing	1,083	83
XVI	Other Manufacturing	923	82

* This column shows wide variations between industries. The index number relating to all manufacturing (82) is partly accounted for by differences in the industrial pattern. If differences between that of East and West Ridings as compared with Great Britain were removed, the average industry gross index numbers were 120 (i.e. equal to GB), the index number for 'Total Manufacturing', at the head of the column, would be changed to about 98.

142. The figures of output in Table 3 relate to the value of net output of manufacturing industry, which measures the value added to materials by the process of production, at the prices current at the time. A change in net output may arise in several ways. It may be the result of a change in the physical volume of output which finds some reflection in values. This may be achieved with no change in the amount of labour or fixed assets employed, or it may arise from a change in employment or in the assets employed. Equally, the change in net output may be due to changes in the selling prices of products arising from altered market conditions, or from changes in average earnings or charges for capital assets.

143. The figures are influenced by factors peculiar to particular industries in particular years. For example, although by 1968 most sectors of manufacturing were well on the way to being re-established on a peace-time basis after two or three years of rapid re-orientation, this process of adjustment was not complete. The year 1968 was relatively favourable for the East and West Ridings in terms of the value of net output. On the other hand, the year 1968 was one in which, nationally, the pressure of demand was comparatively low, by post-war standards. The weakness in 1968 was marked in textiles, clothing and metal manufacture, all major elements of industry in the West Riding of Yorkshire.

144. The indication is that in 1968 at any rate, and even after allowance has been made for differences in the industrial structure, net output per person employed in manufacturing industry in the East and West Ridings was approximately 4 per cent below the national average.

New Industrial Building

145. The amount of fixed assets available to industry is an important factor in output, whether expressed in totals or in terms of net output per person employed. New buildings are, of course, only part of total investment. They accounted for about 26 per cent of capital expenditure on all fixed assets in manufacturing industries in the United Kingdom in the period 1961-62. In some industries the proportion was considerably greater than this and in other industries considerably smaller. Some industries require more expensive plant and machinery, while the square foot cost of buildings can be quite different according to purpose.

146. In the eighteen years 1945-62 the area of new buildings and extensions built by manufacturing industries in the East and West

Ridings was substantially less than might have been suggested by the number of persons employed in manufacturing. This is illustrated in Table 4.

TABLE 4
Area of Buildings Completed for Manufacturing Industry, East and West Ridings, 1945-62

Square feet completed 1945-62	Index, G.S. = 100
Per person employed in 1964	78
Per £1 net output in 1964	78

147. An examination of building completion figures for the period from 1st January 1960 to 30th June 1965 (see Appendix A25) shows some narrowing of the gap between the national and the regional rates of building completions. This was to some extent due to completions in this period of large developments for the steel industry, including some approved in earlier years. Table 5 introduces figures for Yorkshire and Humberside and compares these with figures relating to the East and West Ridings. This comparison indicates the extent to which the addition of Lindsey improves the picture of new industrial building in the region. Table 5 also introduces a comparison of industrial development certificates approvals in recent years. This shows that the rate of new industrial building in the region will continue to be below the national average for at least the next year or two.

148. The completion rate of new buildings for manufacturing industry in the East and West Ridings has been substantially lower than for Great Britain. This is perhaps to be expected in a region where the industrialised areas have a large stock of industrial buildings. Many of these buildings, especially in the West Riding, have been there for a long time and some do not provide suitable industrial accommodation for modern equipment and up to date production methods. The comparatively slow rate of industrial building in this part of the region therefore represents a weakness which needs to be remedied.

Incomes and Earnings

149. The Inland Revenue figures for the

1960-60 tax year put the average total net income in the East and West Ridings at 87.0 per cent of the national average. Ministry of Labour figures of average weekly earnings of adult male manual workers show that between 1960 in East and West Ridings, and 1966 in Yorkshire and Humberside, average earnings in the region ranged between 95.3 and 97.0 per cent of the United Kingdom average, whilst the 1961-63 Family Expenditure Survey showed average income per household in the East and West Ridings to be 96.0 per cent of the average for Great Britain.

150. In very general terms, incomes and earnings in the region are in line with those in the neighbouring northern regions (North West and Northern) higher than in the South West, Wales and Scotland, but lower than in the London, Southern, South Eastern and Midlands areas when there is a need to pay higher wages in order to remain competitive in the labour market.

151. In general, earnings in particular industrial groups in the region are slightly below the national average. There are exceptions, however, particularly in some of those industrial groups on which the region is most dependent. In metal manufacture and textiles, earnings in the region are approximately equal to the national average; on the other hand, in engineering, earnings in the region are well below.

152. The growth of earnings between 1960 and 1966 (based on the average earnings of

male manual workers) in the East and West Ridings conformed to the national pattern and like overall incomes was slightly less than the average growth in the United Kingdom. The only industries of any magnitude in which growth of earnings was greater than the national average were the food, drink and tobacco group and transport and communications (excluding railways and sea transport).

153. While the analysis is far from complete, the indications are that the regional trend in incomes and earnings continues to lag behind the national average, although it has to be remembered that, because of regional variations in price levels, it does not necessarily follow that the real value of these incomes and earnings is less than in the country generally.

Conclusions

154. The indications taken together suggest that Yorkshire and Humberside would be able to quicken its industrial pace if its manpower resources could be more effectively used and built up, and if the industrial structure of the region could be improved by the gradual introduction of some of the newer industries, especially in the engineering sectors.

155. The manpower position is extremely tight and calls for action on two fronts: first, to step up productivity and to make the fullest possible use of the manpower resources which are available, and secondly, in time, to reverse the loss from net migration.

TABLE 5

Industrial Development Certificates, East and West Ridings and Yorkshire and Humberside Economic Planning Region, 1960-65

Index: 1958=100

Area	Percentage of Total Employed in Great Britain in Manufacturing Industries 1963	New Buildings and Extensions completed for Manufacturing Industries in the period 1.1.1960-30.6.65	Square feet approved by all Industrial Development Certificates issued in the period 1.4.1960-31.12.65
1	2	3	4
East and West Ridings	54	80	83
Yorkshire and Humberside Economic Planning Region	103	99	93

NOTE. The index numbers in columns 3 and 4 are based on completions of areas completed, column 3, and approved, column 4, in relation to the number of workers employed in manufacturing at mid-1963.

4 A Regional Manpower Budget for 1971

156. This chapter considers the likely relation of manpower supply and demand in the region in 1971. Like all forward estimates such a manpower budget makes use of a range of reasonable assumptions on such matters as population and migration changes, activity rates and the level of labour demand. A detailed explanation of the methods used is given in Appendix E. These assumptions are subject to a considerable margin of error. As has been pointed out in the Preface, the forecasts were completed by June 1968, and do not therefore take account of any likely effects arising from the restrictive measures announced by the Prime Minister in July of that year. Although these measures are expected to have a considerable impact in the near future, their effects in the longer term should not be such as to invalidate the broad picture shown. It is felt that the budget still provides a useful indication of margins within which, by 1971, labour demand and supply in the region might balance. These implications are particularly relevant to this review, since a regional industrial enquiry undertaken, on behalf of the Council, by the regional organisations of the Confederation of British Industry and the Chambers of Commerce, indicated that large sections of industry in the region were seeking to increase production over the next five years largely through a considerable expansion of the existing labour force.

157. Because of the age structure of the population, the increase in the number of people available for work in Great Britain in the period up to 1971 is expected to be proportionately much less than the increase in the total population. Given present migration trends, the forecast change in labour supply in Yorkshire and Humberside ranges from an increase of only 1,000 to an actual decrease of 19,000 in the period up to 1971. (See Appendix E, Table 1.) The number of men available for employment is likely to increase slightly, but

the number of women is expected to fall considerably. Moreover, these figures take no account of the rising of the school-leaving age to 16 which, from the autumn of 1971, will permanently reduce the number of people available for work in the region by between 1 and 2 per cent.

158. Between 1963 and 1965 demand for labour, as measured by employment, increased in the region by about 6 per cent. If this rate of growth of demand were to continue, an additional 46,000 jobs would arise between 1965 and 1971. But labour demand on such a scale would far exceed the natural increase in the region's manpower resources. Official regional estimates of labour demand are that there will be an increase ranging from a lower limit of 14,000 to an upper limit of 34,000 (see Appendix E, Table 2). Most of this will be in the demand for women workers, for which the range is from 21,000 to 27,000. The demand for men is expected to be relatively stable, ranging from a loss of up to 7,000 jobs to an increase of up to 7,000. Employment contraction in the basic regional industries of coal mining, textiles and clothing is likely to continue. The other principal contractions are expected to be in transport and communications and in agriculture. On the other hand, continued and marked increases in employment in engineering, electrical and metal goods, in construction, professional and scientific and miscellaneous services are forecast. Figure 19 compares the forecast changes in individual industries up to 1971 with the changes which occurred between 1963 and 1965.

159. Table 6 brings together, in summary, forecasts for 1971 of labour demand and effective supply (i.e. as defined in Appendix E, paragraph 6).

160. Table 6 shows that, with net migration losses continuing, there would be a considerable

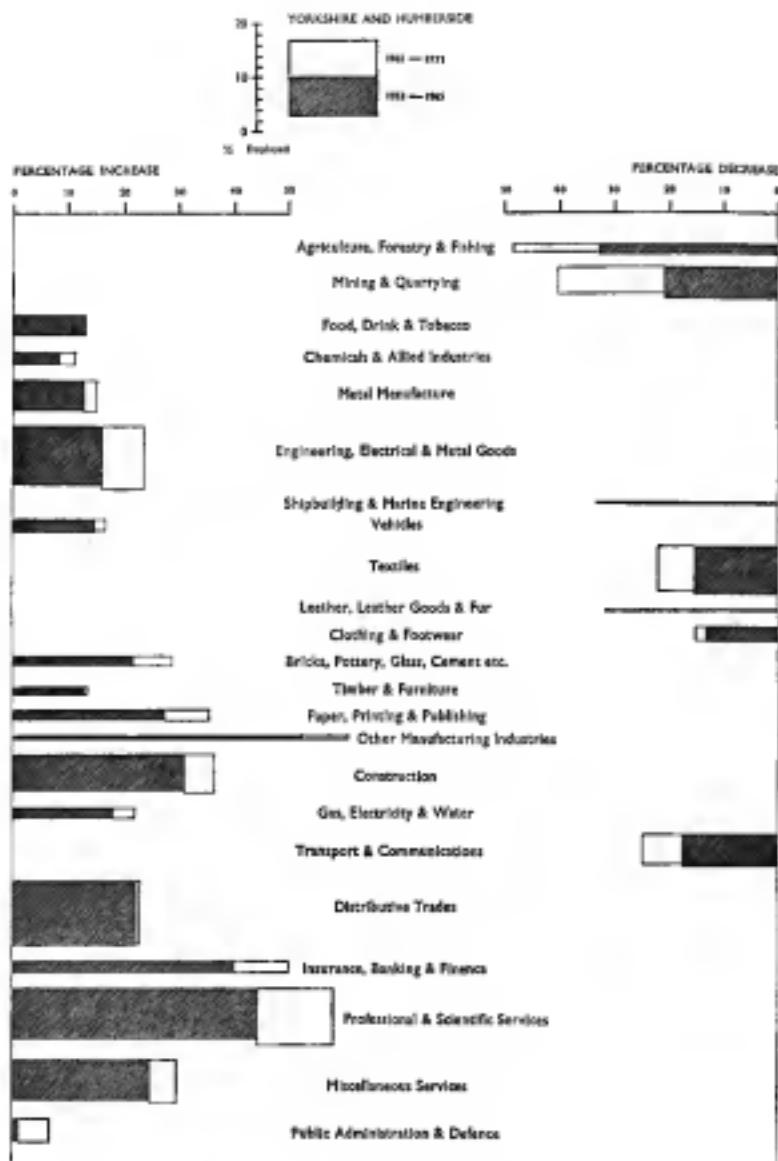


Fig. 19 Employment Changes, 1968-69, and Forecast 1968-71, and Distribution, 1968 and Forecast 1971: Yorkshire and Humberside
 The heights and widths of the bars are proportional to the numbers employed in each industrial order and the percentage changes respectively.

TABLE 6

Manpower Budget for 1971

Thousands

	With Migration			Without Migration		
	Males	Females	Total	Males	Females	Total
Labour Demand	1,397 99 1,396	768 10 764	2,098 10 2,118	1,387 10 1,381	768 10 764	2,098 10 2,118
Effective Labour Supply	1,341 10 1,351	717 10 723	2,066 10 2,078	1,372	738	2,107
Likely range of surplus or shortage of jobs	+3 10 -11	+36 10 +46	+27 10 +47	-21 60 -35	+23 10 +29	+6 10 -12
Average net surplus or shortage of jobs	-4	+41	+37	-28	+25	-2

overall surplus of jobs by 1971—but, with migration losses halted, labour supply and demand would not be much out of balance.

161. Total figures of demand and supply, however, mask considerable variations between those for men and women whose fields of employment do not, broadly speaking, coincide. In practice, therefore, each ought also to be considered separately. For men, if migration follows the trends forecast in Chapter 2, the exercise indicates that there would be a marginal shortfall of jobs (of the order of 4,000) which would represent no more than a slight easing of the current extremely tight labour situation. The shortfall might be a good deal greater (28,000) if migration losses ceased altogether. This could hardly be expected to happen within the relatively short timespan of the forecast—although if it did, the resulting additional labour could provide a potential labour force for much-needed new industry. For women, on the other hand, a marked

surplus of jobs seems inevitable in all foreseeable circumstances—varying from about 41,000 unfilled jobs if migration continues at past levels, to 28,000 if migration losses could be halted. There would be no real solution in trying to switch from women workers to men since, as already indicated, the situation is one of total labour shortage.

162. The general conclusion which emerges is that there is unlikely to be any significant easing in the regional manpower situation by 1971—indeed, in the areas where it is already difficult it is likely to be very much more so. The implications of this are inescapable, although they have perhaps not yet been fully recognised and accepted by industry throughout the region. The risk of industrial growth being hindered is a real one and gives further emphasis to the crucial importance of utilising the region's limited manpower resources in the most economical and efficient way possible.

5 Industry and Employment in the Sub-Divisions of the Region

163. Chapter 4 provides ample evidence of the diversity of the region's economic activities, but the regional picture inevitably obscures significant and important differences between separate areas within the regional boundaries. The seven sub-divisions defined in Chapter 1 show wide variations in size, population, degree of industrialisation, economic growth, dependence on particular industries and rate of unemployment. This chapter presents a brief review of the principal features of industry and employment in each sub-division and attempts to identify the problems of each area and to consider its future prospects. Details of numbers employed and changes in employment in the sub-divisions are given in Appendix A 26, 27 and 28.

164. The region's seven sub-divisions fall fairly naturally into four groups: the densely populated older industrial areas of West and South Yorkshire, with their predominance of manufacturing industry, their slowly growing population and loss of population through migration, and their relatively slow rate of expansion; North and South Humberside, rapidly moving from their dependence on the ports of Hull and Grimsby to a broader based economy, with growing populations and great possibilities of further development but still with relatively high unemployment; the Yorkshire Coalfield with its special problems arising from the dominance of the coal industry; and the largely rural areas of Mid-Yorkshire and South Lindsey with their problems of seasonal employment and contraction in agricultural manpower. Basically and economically, the sub-divisions are complementary but there are varied problems and sometimes conflicting needs.

West Yorkshire

165. West Yorkshire is by far the largest sub-

division, its 900,000 employees representing over two-fifths of the region's labour force. Large numbers of workers travel in from other sub-divisions—at the 1961 census, about 18,000 from the Yorkshire Coalfield and 8,000, mainly professional and executive workers, from the Harrogate/Wetherby area of Mid-Yorkshire. A striking feature of the area, which has strongly affected employment trends, is the high proportion of women (nearly 40 per cent) in its working population.

166. As in all established industrial areas, a large proportion (just over half) of West Yorkshire's workers are employed in manufacturing industries. This is higher than in any other sub-division except South Yorkshire. Three-quarters of manufacturing employment is concentrated in three industries: the traditional textile and clothing industries with their centres at Bradford and Leeds respectively; and engineering, spread widely throughout the sub-division, well diversified but including much heavy engineering. Textiles is by far the largest manufacturing industry, with 172,000 employees, mainly in woollen and worsted. Clothing, with 46,000 employees, is the third largest. West Yorkshire's dependence on these two industries has, however, gradually been reduced in recent years. Both industries have maintained output although suffering from a serious shortage of labour, especially of women. In contrast the predominantly male employing engineering and allied industries, with 112,000 employees, have expanded their labour force rapidly. Moreover, West Yorkshire has a variety of other manufacturing industries, many localised, e.g. printing, steel foundries, and non-ferrous metal manufacture in Leeds; sweets and biscuit manufacture in Halifax and Batley; tractors and their components in Huddersfield and Bradford; aero-engines in Barnoldswick; and chemicals in Leeds and Huddersfield. Employment in all these industries, except chemicals, has increased in

recent years and provided greater diversification. But it is significant that because of the fall in numbers employed in textiles and clothing, employment in manufacturing industries as a whole showed a decrease between 1958 and 1965 in contrast to increases regionally and nationally.

167. Employment in West Yorkshire's primary industries—16,000 in coal mining and 5,000 in agriculture—also declined, but broadly in line with the regional pattern. Despite fast growth between 1958 and 1965, employment in construction (54,000) remained proportionately low, reflecting the relatively low number of projects in large scale industrial building and redevelopment in the area. Although West Yorkshire provides some services covering an area well beyond its boundaries, employment in the service industries is slightly below the regional proportion, and growth in recent years has been generally slower than in other sub-divisions. The number of women employed, however, has increased substantially, especially in educational and health services.

168. Between 1953 and 1965, West Yorkshire had the slowest overall growth of employment of all the sub-divisions except South Lindsey, mainly because of slow expansion in the employment of women. This seems to be due partly to the tradition of women working, which means that the reserves were small; partly to the relative unattractiveness of some of the available employment; but perhaps most of all to the marked fall in the numbers of women of working age, in which migration has been a factor. Male employment would clearly have expanded much less quickly but for the influx of Commonwealth immigrants between 1959 and 1963.

169. Employment trends varied in different parts of the sub-divisions. Growth was faster in areas with the greatest diversity of industry (Leeds, Wakefield, Rothwell, Guiseley, Otley). In the wool textile and engineering area (Bradford, Huddersfield, Halifax, Skipton, Keighley, Shipley, Brighouse, Elland and Spen Valley) and in the heavy woollen district (Dewsbury, Batley and Morley) the fall in numbers employed in textiles was in general offset by increased employment in other industries. The Pennine cotton fringe towns of Todmorden, Hebden Bridge and Sowerby Bridge, more heavily reliant on textiles in the past, suffered a loss of employment, especially for women, because the establishment and expansion of other industries was insufficient to keep pace with the decrease in textiles. Bingley, the fourth cotton fringe town, was less affected because of the expansion of aero-engine manufacture.

170. Unemployment in West Yorkshire between 1958 and 1965 (see Figure 18) was consistently low and, except during periods of recession, outstanding vacancies have been at a high level, particularly for women. The demand in all industries has outstripped supply.

171. The striking feature in the West Yorkshire sub-division is therefore the apparent paradox of slow employment growth alongside low unemployment and great pressure of labour demand. The sub-division's potential has been shown by its ability to absorb workers from abroad—Poles and European Voluntary Workers after the second world war, Austrian and Italian women and, more recently, large numbers of Commonwealth immigrants. The conclusion seems to be that the sub-division's industrial structure would have been sound enough to produce a faster rate of growth had greater labour resources been available. The net outward migration of workers cannot be attributed to lack of employment opportunities overall, but lack of variety in jobs may be a contributing factor, together with social and environmental conditions, which are poor in many respects. The remedy, therefore, would seem to lie mainly in seeking to improve the conditions in which the population of the area has to live and work. An infusion of some newer, and in some places more varied, industries might also have some effect in reducing migration; it might also help to improve standards generally and by increasing competitiveness compel industry to utilise labour more efficiently and economically. But granted the existing labour shortage, the more efficient use of manpower and the improvement of environment are essential to success in attracting new industries.

South Yorkshire

172. The South Yorkshire sub-division, although small in area, is the second largest in terms of manpower and, like West Yorkshire, is highly industrialised. Its labour force of 368,000 (over one-sixth of the region's total employment) included, at the 1961 census, about 15,000 travelling in from the Yorkshire Coalfield and about 15,000 from neighbouring North Derbyshire. The proportion of employment in the manufacturing sector (nearly 52 per cent) is the highest of all the sub-divisions, and marginally above West Yorkshire. The two major and closely related manufacturing groups—metal manufacture (predominantly iron and steel) with 76,000 employees, and engineering with 77,000 employees (including some 12,000 engaged in making cutlery and plate, for which Sheffield is renowned)—

together account for four-fifths of the sub-division's manufacturing employment.

173. Expansion in manufacturing employment since 1969 was proportionately the lowest of all the sub-divisions except West Yorkshire, although it accelerated in the last two years. This low rate of growth was mainly because the engineering and allied industries, the quickest growing sector of manufacturing in the country as a whole, expanded only slightly—in striking contrast to the appreciable increase in other parts of the region. By contrast, employment in metal manufacture increased appreciably. The metal-manufacturing and most of the sub-division's existing engineering industries are predominantly male-employing. However, recent expansion in some of the smaller industries, notably within the food-manufacturing group which now has 13,000 employees, has produced additional employment for women.

174. Most of the 10,000 workers employed in the primary industries are in coal mining, where the fall in manpower since 1959 has been proportionately greater than elsewhere in the region. There was rapid expansion in the construction industry between 1959 and 1963, but with the completion of major construction projects, notably at steel works, the labour force (24,000 in 1965) has declined slightly since 1963. As in West Yorkshire, the service industries, with a total of 143,000 employees, are somewhat under-represented, but employment growth in the service group since 1959 has been much faster than either regionally or nationally, especially in miscellaneous and professional and scientific services.

175. The overall increase in employment in the sub-division since 1953—much of it in the service and construction industries—was at a rate higher than in the region as a whole. Employment for women expanded faster than that for men. In recent years, unemployment has been consistently low (see Figure 18), even in times of recession in the steel industry. There have been substantial outstanding demands for labour, particularly in recent years for women. In view of the rather low proportion of women in the total labour force compared with West Yorkshire, this suggests that numbers of married women in the sub-division are unwilling or unable to take employment; possibly because of the domestic difficulties associated with shift working in the steel industry.

176. The sub-division has thus shown continuous, if not spectacular, expansion in employment since 1953, with slight acceleration in the more recent years, and population trends are more favourable than in West Yorkshire. Here again, however, there is much

reason to believe that more efficient use of manpower would lead to considerable increases in production and productivity, particularly among the smaller steel-producing firms. The surprisingly low rate of growth in the engineering sector is a somewhat disturbing feature.

Yorkshire Coastfield

177. The Yorkshire Coastfield, with a labour force of 287,000, is the third largest sub-division in terms of manpower. Its dependence on coal mining (which employs one-third of the total and nearly one-half of the male labour force) is so pronounced as to influence its entire economy. In particular the lack of employment for women and the limited opportunities for men outside coal mining compelled large numbers (23,000 men and 10,000 women at the 1961 census) to travel to the neighbouring West Yorkshire and South Yorkshire sub-divisions for employment.

178. The sub-division's collieries are amongst the most economic in the country. Consequently miners are being transferred from other coalfields. Rapid progress with mechanisation has reduced the manpower requirements. Persistent loss of men through voluntary leaving has now, however, resulted in the available labour force falling below requirements. The reduction in manpower between 1959 and 1965 was over 16,000, although this was proportionately less than in the fringe areas of the coalfield in West and South Yorkshire. A few uneconomic pits are scheduled for closure, but the real problem is likely to remain a shortage, rather than a surplus, of men prepared to work in the industry.

179. In striking contrast to the neighbouring West and South Yorkshire sub-divisions, the Yorkshire Coastfield's share of employment in manufacturing industries is small. Expansion has, however, been fairly rapid, the number of employees increasing by over 8,000 between 1959 and 1965. Increases have been greatest in engineering, wool textiles, clothing and glass and brick manufacture, partly offset by a decline in vehicle and food manufacture. Efforts to attract industry employing women have led to the establishment of branch factories by textile, clothing and hosiery and knitwear firms from West Yorkshire and the Midlands. In fact the number of women employed in manufacturing industries has grown much more rapidly than the number of men.

180. There has been exceptional growth in employment in the construction industry since 1968 as a result of large scale colliery and power station projects and major road works.

The service industries are all seriously under-represented in the sub-division and their growth has been slow in comparison with the rest of the region. One explanation of this is that, for many services, people look either to Leeds or to Sheffield.

181. Because of the contraction in coal mining, there has been hardly any growth in male employment within the sub-division since 1953—in marked contrast to all other sub-divisions except South Lindsey; and although employment for women rose substantially throughout the twelve years and especially rapidly in the last two years, the proportion of women workers is still lower than in any other sub-division. The Coalfield has a more balanced distribution of employment than in 1953, but the restricted range of employment opportunities is reflected by the continued and considerable daily movement both of men and women to work in other sub-divisions, particularly in the long distance travelled by women in special transport provided by their employers.

182. Unemployment in the sub-division since 1955 has been consistently above the regional average (see Figure 18), with particularly high levels in certain areas (Thorne, Hemsworth/ South Kirkby, Mexborough/Goldthorpe and Meltham) and unemployment among women is especially high. In spite of a fairly constant unsatisfied demand for labour in coal mining, vacancies for men, as well as those for women, have been well below the numbers unemployed; and the lack of variety of employment opportunities also affects young people, especially those with good educational qualifications.

183. From the industrial and employment angle, the Yorkshire Coalfield thus presents unique problems. Even with a decreasing labour force, its coal mining industry will produce an increasing proportion of Britain's coal. It is also an important reservoir of labour for the textile, clothing, food and steel industries of West and South Yorkshire.

184. Nevertheless, viewed in isolation the sub-division lacks adequate employment both in amount and variety and, having regard to the relatively high level of unemployment and to the rapidly growing population in the Coalfield, some additional and more varied employment is desirable. This need not conflict with the interests of coal mining, since the willingness of miners in contracting coalfields to transfer to Yorkshire might well be affected by the availability of sufficiently varied opportunities for their wives and children. If employment of women in the sub-division were increased, this would be likely to aggravate labour shortages in adjacent areas. Employers in these

areas might well find it more economical in the longer term to set up branch establishments in the Coalfield as some textile and clothing firms have done already. The eastern half of the sub-division, on the expanding side of the coalfield, with important new power-station developments and containing a major intersection of east/west and north/south road and rail communications, has many possibilities for economic growth which could benefit a wide surrounding area. The Doncaster, Knottingley and Pontefract areas in particular offer scope for further developments providing employment both for men and women.

Mid-Yorkshire

185. Although the second largest sub-division in area, Mid-Yorkshire is sparsely populated and has a relatively small amount of employment. Its 161,000 employees represent only 7 per cent of the regional labour force. Industrial employment is largely concentrated on the city of York, which draws in labour from the surrounding area; otherwise the sub-division is primarily an agricultural, residential and resort area. Owing to its preponderance of service industries, and the nature of its manufacturing industries, Mid-Yorkshire's proportion of female employment is the highest of any sub-division, being marginally above that of West Yorkshire. The south-western part of the sub-division has close links with the West Yorkshire conurbation, some 6,000 workers travelling daily into Leeds from the Harrogate/Wetherby/Tadcaster districts.

186. Agriculture, with 8,000 employees, is spread throughout the area in arable, dairy and mixed farming units. However the sub-division is much less dependent on agricultural employment than the region's other predominantly rural sub-division, South Lindsey. Employment in agriculture is declining quite rapidly and there is a risk of further rural depopulation in Ripon and Patesley Bridge Rural District in the west and in the eastern parts of the sub-division.

187. Manufacturing industries, with a total labour force of 43,000, just over one-third of them women, provide only 28 per cent of Mid-Yorkshire's total employment. More than half is in York. Selby is the only other town which has manufacturing industry on a significant scale. The most important manufacturing industry in the sub-division is the food, drink and tobacco group (18,000 employees), about two-thirds of which is in the chocolate and sugar confectionery industry in York, and the remainder mainly in brewing, flour milling and sugar extraction and refining. Employment has increased slightly in recent years. In the

vehicles industry, employment in the manufacture of motor vehicle components has increased and employment in railway locomotive and carriage-making has decreased. Together they employ over 5,000 workers. Other industries with a significant and increasing share of the sub-division's small amount of manufacturing employment include engineering and paper and printing. Overall growth in Mid-Yorkshire's manufacturing industries has been fairly rapid since 1969, resulting in a gain of some 4,000 employees.

188. The construction and service industries, with 14,000 and 86,000 employees respectively, are very well represented in the sub-division but expansion has been slow. The construction of the huge new power station at Drax should change this situation. Railway employment, for which York is an important centre, declined substantially, but there was growth in health and education services, and in the hotel and catering industry in the holiday resorts of Bridlington and Filey and the conference centre and spa of Harrogate.

189. Total employment in Mid-Yorkshire expanded appreciably between 1963 and 1968, but most of the expansion occurred before 1968. Employment of women grew continuously but increases in male employment in some industries were offset by the decline in agriculture and transport.

190. Unemployment has generally been higher than in the region as a whole (see Figure 18), due to high seasonal unemployment in the holiday resorts. Unfilled vacancies for men tend to be lower than the numbers unemployed, but the reverse applies to women, especially at York and at the seaside resorts during the season. Bridlington and Filey present their own special problems.

191. The greater part of the area is likely to remain predominantly agricultural and the Wetherby/Tadcaster district to become increasingly a dormitory area for the West Riding conurbation. Harrogate has developed as both a conference and office centre and will continue to do so. York, with its new university, could also prove attractive for development as an administrative, research and office centre as soon as its physical planning problems have been solved. Selby, adjacent to the region's 'cross roads', may well develop industrially to a greater extent than other parts of the sub-division.

North Humbershire

192. With a total labour force of just over 200,000, mostly in the city of Hull and its

environs, North Humbershire contains some 10 per cent of the region's employment. The sub-division is largely self-contained. The planned development of road access to the sub-division will reduce the present sense of isolation. Port services and port associated industries play an important part in its economy, whilst there is increasing diversification and rapid growth in manufacturing industries and a significant share of employment in agriculture and fishing. Many of the major industries employ mainly men and the proportion of women in the total number of employees is rather low.

193. Manufacturing industries account for only about one-third of total employment, but they have grown substantially in recent years. Three-fifths of the total of 70,000 employees in manufacturing are engaged in four groups: chemicals (13,000), engineering (11,000), food (10,000) and vehicles (3,000). The chemical group, producing industrial chemicals, drugs and pharmaceutical chemicals, paints, dyes, oils and soaps, has expanded considerably since 1969. Employment has also increased in the engineering industries, which have a smaller share of manufacturing employment than most sub-divisions, and in the vehicle industry, which consists of aircraft manufacture at Hessle and motor component manufacture at Beverley. Employment in the food industry group has remained relatively stable since 1969. In the same period, shipbuilding has experienced a slight drop in employment but all the other smaller manufacturing industries had relatively large increases in recent years, especially timber and woodworking, and paper, printing and publishing.

194. Nearly 8,000 workers are employed in agriculture and fishing. Employment in both these industries has been declining quite rapidly. The number of employees in the construction industry has increased only slightly since 1969 after remaining static throughout the post-war period. The expansion immediately after the second world war, for urgent demolition and re-building work, was followed by dock reconstruction and other work undertaken in later years. Demand on the industry is likely to remain to meet the programme of dock expansion as well as for redevelopment in Hull.

195. North Humbershire's above-average reliance on employment in the service industries is mainly explained by its large amount of employment in port and sea transport and in the shipping, warehousing and wholesale distributive services associated with the ports. Except for the transport and communication group, in which employment contracted com-

siderably, service industry employment has expanded since 1958.

196. The overall rate of growth in employment in the sub-division since 1958 has been much greater than regional and national rates and almost as high as in South Humberside. Although the number of men working increased at a faster rate than regionally, the rapid rise was mainly due to growth in the employment of women, partly in manufacturing, but much more in service industries. The number of women working increased by over 40 per cent between 1953 and 1965, much faster than in any other sub-division.

197. Despite this growth in employment, the average rate of unemployment has been persistently above both the regional and the national level, although gradually improving (see Figure 18). Unemployment figures are affected as in all port areas by a good deal of casual and intermittent employment. The fact that overall labour demands for men have been well below, and those for women only just above, the numbers unemployed indicate that the labour market is not unduly strained. Opportunities for young people have been good, apart from a shortage of clerical and commercial openings.

198. A persistent net loss by migration in recent years has meant relatively slow population growth in North Humberside despite a high rate of natural increase. This, together with the fairly high level of unemployment and relatively low proportion of women in employment, suggests that there is potential for further expansion of both manufacturing and other industries. North Humberside's now reasonably diversified economy and its fast growth indicate that expansion is likely to continue. Whether without stimulation it will be sufficient to reverse past migration trends is difficult to say. The long term future of North Humberside must, however, be considered along with the future development of South Humberside and both are to be included in the Government's study of Humberside as an area for major development. The pooling of the resources of the two sub-divisions, following the building of a Humber Bridge, would benefit both.

South Humberside

199. South Humberside has seen major development since the second world war, but it still remains one of the least industrialised of the regional sub-divisions. The labour force numbers some 125,000, representing only 6 per cent of the region's employment, and its industry markedly lacks diversification. In-

dustrial development is confined to Scunthorpe, Grimsby and the Humber bank near Immingham; the rest of the area is rural in character.

200. The iron and steel industry dominates Scunthorpe and employs 22,000 out of the total of 50,000 engaged in manufacturing in the sub-division. Since 1958, employment in the industry has grown rapidly, much faster than in the Sheffield/Rotherham area, and further major projects are planned. The south bank of the Humber is, in the Council's view, particularly suitable for large scale economic expansion of steel production.

201. Grimsby has become a major centre for the freezing, processing and packing of foods, in particular fish and vegetables, and this is the second largest manufacturing industry in the sub-division, employing 8,000 workers, more than half of them women. Employment in the food industry has, however, increased only slightly since 1958.

202. A new chemical industry has grown up in recent years with the establishment of large plants engaged in the manufacture of titanium pigments, fertilisers, pharmaceuticals and other chemical products. Although many of these are capital intensive, employment has expanded quite quickly.

203. Together, the iron and steel, chemical and food groups account for three-quarters of manufacturing employment in the sub-division. Smaller manufacturing industries include ship-building and repairing and the manufacture of synthetic fibres and paper at Grimsby. At Scunthorpe there is some light engineering and knitwear.

204. Despite growth in manufacturing employment, agriculture and fishing, although contracting, are still important—the former with 5,000 employees mainly in arable farming, the latter with 3,000 workers at Grimsby.

205. The construction industry has recently expanded very rapidly. The service industries are also an important element in the Grimsby/Immingham area because of employment in the port and in the storage and distribution of oil, petroleum and other products. Scunthorpe, on the other hand, has a relatively small amount of employment in service industries.

206. The rate of growth of employment since 1953 has been the highest of any sub-division and is well above the national rate. The most telling feature is the expansion in male employment by nearly one-fifth, but employment of women has also increased by one-third (exceeded only by North Humberside), although the rate has been less rapid in the last two years.

207. Despite the rapid growth in employment, the unemployment rate in the sub-division, (see Figure 18) has been above the regional and national levels. Male unemployment is high because some of the employment in Grimsby is casual and intermittent, and unemployment among women is raised by the seasonal work in the holiday resort of Cleethorpes. The proportion of women workers is very low, and only slightly above that in the Coalfield. This is partly due to the lack of employment opportunities at Scunthorpe. Unfilled vacancies both for men and women have generally been below the numbers unemployed, suggesting that labour demand is not as strong as in some other parts of the region. Employment opportunities for young people are limited for an area which has a young population and a high rate of natural growth.

208. In the short term, therefore, there is scope for the attraction of additional industry employing both men and women, with a need for a greater diversification of the industrial structure: for example, the further development in Scunthorpe of the engineering and metal-using industries and of service employment.

209. Together with the north bank of the Humber, the potential for longer term large scale expansion in the sub-division is the subject of a special study which, as part of a wider survey of the country as a whole, is being undertaken by the government.

South Lindsey

210. Although large in area, South Lindsey is much the smallest of the sub-divisions in terms of population. Its labour force of 37,000 is less than one-fifth of the total number of employ-

ees in the region. It is a self-contained and predominantly agricultural area, with some seaside resorts but little manufacturing employment, with the important exception of Gainsborough.

211. Agriculture, mainly arable farming, employs just over 5,000 or one-seventh of the total number of employees. Agricultural employment has declined quite rapidly in recent years with the result that in some rural areas population is falling. More than half the 8,000 workers in manufacturing industries are in engineering, though employment in this industry is not expanding. Grain milling is the only other industry of any size. In recent years, some new manufacturing industry has been introduced on a small scale in Skegness and Mablethorpe. The service industries have also expanded, most noticeably the hotel and catering trade in Skegness. Overall growth in employment since 1983 has been the lowest of all the sub-divisions. Employment of women has increased considerably, but male employment has fallen slightly owing to decreases in agriculture and, more recently, in engineering.

212. There is much more seasonal variation in unemployment than in any other sub-division, (see Figure 18) because of the amount of agricultural and holiday resort work. Overall, unemployment has been consistently higher than the national average. Moreover, employment opportunities for young people are limited. The population is widely scattered and public transport facilities are inadequate, so that the jobs which exist on South Humber-side are not readily accessible to the majority. The local authorities are making efforts to attract small scale industry to the market and seaside towns and their efforts should be supported.

6 Energy

213. The region's industrial prosperity owed its foundation to its possession of a huge local source of cheap energy — the Yorkshire coalfield. The coalfield has enabled the region to meet the bulk of its energy requirements from within its own boundaries and to sell a considerable surplus of coal and electricity to other parts of the country. Despite great technological progress, in which the region has shared fully, the situation remains substantially the same today, but there have been significant changes in consumption patterns and more are in prospect.

214. There are at present four main elements of energy supply in the region. Two of them, coal and oil, may be used as direct sources of energy, or they may be used to produce the other two, secondary sources, electricity and gas. In addition, North Sea natural gas will become available as a third primary source.

Regional Fuel and Power Supplies

Coal

215. The region's coal industry is at present administered by the Yorkshire Division of the National Coal Board. From 1967, it will be operated as four separate areas (North Yorkshire, Doncaster, Barnsley and South Yorkshire) each directly accountable to NCB headquarters. These four areas contain a hundred collieries, all but four of which are within the boundaries of the Economic Planning Region. The Yorkshire Division and the East Midlands Division, which contains the other half of the same coalfield, between them now produce roughly half the total output of coal in Great Britain. They are both in the forefront of the great technological changes in coal mining. Over 85 per cent of the coal mined in the Yorkshire Division is now produced mechanically. A consistently high level of output has been maintained by the Division since the war although the labour force has

appreciably declined. In 1965-66, output per manshift stood at 38.7 cwt. compared with the national average of 36.1 cwt.

216. The history of the coalfield is one of a steady shift of the main centres of production from west to east. This is still proceeding, and a relatively small number of pits in the western part of the coalfield have been or are to be closed because of the exhaustion of economically workable reserves. There are, however, more than 4,000 million tons of reserves already proved to be accessible and workable by present methods, giving the coalfield a 'life' of the order of a hundred years at the 1965 level of production. There is no doubt that in the relatively short period covered by this review the demand will exist. As its share of the targets which were in the National Plan, the Yorkshire Division aims to increase production from 43.5 million tons in 1964-65 to between 48 and 50 million tons by 1970-71, chiefly to meet the increased demand of power stations.

217. This promising outlook is, however, seriously threatened by the increasing shortage of manpower. Despite the transfer of miners from other coalfields (over 2,000 since 1962), the labour force continues to decline rapidly. According to figures produced by the Yorkshire Division of the National Coal Board, net wastage totalled some 5,000 during 1965, was running at a rate of 8,000 a year in July 1966, and increasing further. There have been striking increases in productivity but even so they are not keeping pace with wastage on this scale. Output actually fell in 1965-66 by nearly 2½ million tons, despite a rise in productivity of nearly ½ cwt. on the 1964-65 figure of 38.3 cwt. per manshift. The Council's fear is that without a reversal of present manpower trends, the coalfield will not meet its planned expansion in production: many of the forecasts in this chapter would then lose their validity.

Electricity

218. The region's electricity supply is almost wholly produced by the Central Electricity Generating Board's heavy concentration of coal-fired power stations in the West Riding of Yorkshire near the coalfield. It is distributed by the Yorkshire Electricity Board. There are at present twenty-two stations with a total output capacity of 4,500 MW. Three giant new power stations are being built on the eastern edge of the coalfield, and an additional new station at Thorpe Marsh, north of Doncaster, with a capacity of 1,100 MW has recently been completed. Two of the three new stations, Ferrybridge 'C' and, on the west side of Selby, Eggbrough, will each be capable of producing 2,000 MW, and the third, at Drax just east of Selby, will be the largest station in Britain, and probably in Europe, with an additional capacity of 3,000 MW, possibly increasing to 4,000 MW. With these stations in service, the potential production of the region will be nearly trebled.

219. It should be observed, however, that this massive development and, in particular, the transmission networks springing from it, will present serious environmental problems. Careful long-term planning is necessary if large tracts of countryside are not to be dominated by transmission lines. The Central Electricity Generating Board works closely with local authorities in the siting of power stations and the routing of transmission lines. The Council attaches the highest importance to this close co-ordination in order to safeguard the region's amenity and development potential.

220. The electricity industry's markets are continuously expanding. The transmission of base load supplies to the West Midlands, Lancashire and the South is expected to increase considerably. The main industries inside the region—iron and steel, mining and textiles—are very large consumers of electricity. Industrial sales account for over half the sales in the region and are the largest of any area board in the country. Some of the increases in the industrial field have been spectacular. One new all-electric steel plant in the Sheffield area, completed in 1985, requires some 1,200 million kWh a year at full production, which represents well over three-quarters of the Sheffield steel industry's consumption in 1982. At the same time, electrification of the rural areas has been pressed forward and is now virtually complete, 86 per cent of all farms having a mains supply.

Gas

221. Gas in the region is provided by two area boards. The East Midlands Board covers the Sheffield/Rotherham/Doncaster area plus

Linsey; the North Eastern Board administers the rest of the East and West Ridings. Technological change has, in scale, been more fundamental in this industry than almost any other, involving a shift from the use of coal as virtually the sole raw material to that of a variety of oils and natural gas. Although coal (supported by coke oven production) is still the main source of gas, oil gas making capacity already sizeably exceeds that of coal gas (see Table 7) and will more than double it by 1970. Methane from the national grid is supplying 10 per cent of the total demand in the region. In addition, by early 1967 natural gas will be made available from the BP Company's strike in the North Sea, for which the landfall of the submarine pipeline is Essington, near Spurn Head. There are also the Shell-Esso, Phillips and Gas Council discoveries to be drawn on and an extra source in till gases from the refineries being built on Humberside.

222. The gas industry's markets have been expanding steadily. After remaining static for many years, consumption in the North Eastern Board's area (East and West Ridings less Sheffield/Rotherham/Doncaster) had risen from 140 million therms in 1962-63 to 175 million therms in 1964-65. In the part of the East Midlands Gas Board's area lying within the region, there has been a steady growth, from 160 million therms in 1965-66 to 220 million therms in 1964-68. The higher consumption in this part of the region is due mainly to a higher proportion of industrial sales, principally to the steel industry. These form 60 per cent of the total, compared with 30 per cent in the northern part of the region. In recent years, however, the increases in both Gas Board areas have been mainly in domestic supplies.

Smokeless Fuels

223. Both the coal and the gas industries, together with certain independent concerns located in the region, produce solid smokeless fuels for domestic and general industrial use. The sale of coke from the gas industry's carbonisation plants, including branded varieties of open-grate types, varies with the severity of the winter but averages about one million tons a year. The National Coal Board produces a further million tons of coke per annum for domestic and industrial use, and additional supplies are produced at independent coking plants. A considerable proportion of the supplies from both these sources is used outside this region. Further development is also taking place in the production of other smokeless fuels made from coal. In addition to the existing extended Coalite plant at Aikem, another plant to make this fuel is under construction at Grimsborough.

The National Coal Board has also developed a smokeless fuel which is to be produced at a plant near Doncaster.

Oil and Natural Gas

224. The demands for oil in the region at present are above 3.5 million tons a year and are expected to increase at the rate of $7\frac{1}{2}$ per cent annually. Apart from the rapidly expanding market for motor fuels, oil is winning markets from coal in the gas producing industry (see paragraph 221) where consumption is already running at 300,000 tons a year. It is also of importance in the steel industry (600,000 tons a year). At present, the region's entire consumption of oil is refined elsewhere, nearly half, in fact, being imported from refineries in Western Europe. Plans have been made, however, for opening two refineries on South Humberside, to reach a total capacity of 10 million tons by 1970.

225. Another important change is now at hand as a result of the discovery of commercially exploitable quantities of natural gas in the North Sea. The first successful strike was made in October 1965 by the BP Company in Block 48/6 (see Figure 20, in pocket) only forty miles east of the Humber. This deposit is expected to yield at least 50 million cubic feet per day for fifteen years. The Gas Council has already contracted to purchase up to 100 million cubic feet per day for three years commencing not later than July 1967. A

pipeline of twice this capacity is being laid from Spurn Head to Killingholme to join the existing gas grid serving the region. Other finds of gas have since been made; importantly by the Shell-Esso Group (Block 49/2B) in March 1966; by Phillips (Block 49/6) and the Gas Council-Amoco Group (Block 49/1B) in May 1966.

226. This natural gas has twice the calorific value of town gas and, at a ratio roughly of one tonne per 100 cubic feet of gas, a production of 50 million cubic feet per day is equal to some 40 per cent of the region's present gas requirements. The full extent of the North Sea discoveries is far from ascertained, but it is already apparent that they are of major dimensions and that their full exploitation must bring changes in the pattern of energy consumption in the region as well as in the country as a whole.

227. The sites of gas and oil drilling in progress are shown on Figure 20 which also shows the extent of the area of the small oilfields in and to the south of Lindsey. Production from this area in 1965 amounted to 71,500 tons, of which 15,500 tons came from the Yorkshire and Humberside section.

Regional Consumption

228. Having looked at the organisation, output

TABLE 7

Yorkshire and Humberside Gas Industry* Production, Capacity and Fuels used in Gas Production

Production MILLION THERMS

Year	Gas Made from		Gas Purchased		Total
	Coal	Oil	Coke Oven	Imported Methane	
1966-67	209	1	125	—	335
1960-61	205	10	127	—	342
1964-65 (estd.)	200	95	120	21	436

Gas Making Capacity MILLION CU. FT. PER DAY

	Coal	Oil
1960-61	08	13
1964-65	206	206

Fuels Used in Gas Production '000 Tons

	Coal	Oil
1966-67	08	37
1960-61	2,400	37
1964-65	2,111	124
(estd.)	2,000	300

* Statistics are not available for the exact consumer territories of the two Boards which make up the region. These figures are thought to be fair approximations as the position as it has developed by mid-1966.

and markets of the region's energy industry. It will be useful to see how its products are used in the region (see Table 8)—and elsewhere—and go on to make such forecasts as are possible of future trends in the pattern of energy consumption.

228. The region continues to rely principally on coal for its energy, using some 27 million tons out of a total consumption of 33 million tons (coal equivalent) in 1964-65. However, the consumption of oil for use both as a direct fuel in transport and industry (especially steel) and for gas-making increased by nearly 50 per cent in the last five years and is expected to continue to increase in the immediate future by 7½ per cent per annum.

230. Domestic and industrial consumption of coal has declined over the last five years, but the fall has been offset to a considerable extent by the growth in coal-fired power station capacity in the region. This growth is by far the most significant factor in the coal market, both regionally and nationally, and electricity generation presently takes about one-third (14 million tons) of the output from the Yorkshire Coalfield. Ten million tons of this are used in power stations inside the region. By 1970-71, the Coalfield is expected to increase its sales to power stations to 25 million tons, and consumption of coal by power stations in the region is likely to double over this period to 20 million tons.

231. In three of its five main markets, general industry, the domestic market and the gas industry, consumption of raw coal has already begun to decline. The decline, in both general industry and the domestic field, is caused mainly by a change to secondary energy sources—electricity and gas. The use of oil as a fuel in industry is also increasing and so is the market for smokeless fuels. In both cases, the clean air policy has been an undoubted stimulant. In industry, technological changes have also had a considerable effect on the use of raw coal as a fuel, especially in the wool textile industry, where consumption fell from over one million

TABLE 8
Regional Fuel Consumption, 1965

Type of fuel	Million Tons, Coal Equivalent
Coal and Coke (all types)	16.2
Oil	6.6
Gas	2.7
Electricity	9.6
Total	33.1

Primary Fuels (including those used in the production of gas and electricity)	Million Tons
Coal	
Power Stations	10.3
Coke Ovens	5.7
General Industry (incl. collieries)	4.7
Gas Making	1.8
Domestic (incl. miners' coal)	3.4
Total	33.0

Oil	
Transport	1.3
Heat and Power	2.6
Gas Making	0.3
Total	4.1

tons to three-quarters of a million tons over the five-year period 1961-65, chiefly because of the switch from coal for steam raising and process heat. The domestic consumer, with rising standards of home heating, has also switched in a big way from the direct use of coal to electricity, gas and to solid smokeless fuels. Table 9 gives the comparative figures, apart from smokeless fuels for which no regional breakdown is available.

232. Although the amount of coal consumed

TABLE 9

Domestic Energy Consumption in Yorkshire and Humberside less Smokeless Fuels

Year	Total consumption			Consumption per head		
	Electricity million kWh	Gas million therms	Coal million tons	Electricity kWh	Gas therms	Coal mt.
1960-61	—	—	2.6	2,060	100	40
1964-65	—	—	2.6	3,100	140	35

by the gas industry remained steady over the last five years, a big fall can be expected in the near future as the industry completes its conversion to the production of gas from oil and to the use of natural gases.

233. The production of coke, largely for the iron and steel industry, has varied with the sorts of trade in the recent past, and is expected to show a slight increase in the period to 1970 in line with the expected increase in iron and steel output. The continuing improvement in blast furnace efficiency will, however, partly offset this increase.

Sales Outside the Region

234. Yorkshire and Humberside has traditionally been an exporter of coal, but large scale sales to countries overseas stopped with the halting of the annual shipment to Europe of some 4 million tons on the outbreak of the second world war. This export trade, much reduced and variable in recent years, is being actively fostered by the National Coal Board. The trade passes through the Humber ports, which also handle East Midlands coal.

235. Since the end of the war, roughly one-third of the 40-45 million tons of coal produced annually has been sold to other parts of the country. The region has also been a consistent supplier of electricity to other regions. The proportion of electricity production in the region which was transmitted elsewhere has declined in the recent past (to about one-sixth of the total), but it is expected to increase again with the completion of the new coal-fired power stations during the next few years.

236. Gas was until very recently essentially a locally provided fuel. The technological revolution involved in the change to oil and natural gas as raw materials, together with high pressure production processes, has, however, also fostered the establishment of a grid system which enables supplies to be transmitted as needed throughout the region and now into the West Midlands. The region has also been linked to the national methane grid and draws about 10 per cent of its gas requirement in the form of North African natural gas. Additional support will soon be forthcoming from the North Sea gas.

The Pattern for the Future

237. The pace of technological change is now so rapid that, even without the added impendence of the reserves in the North Sea gas-fields and the use to which they might be put, it is very difficult to make forecasts of the future of the various sectors of energy supply. By 1970, always provided that the coalfield can meet its manpower requirements, there should be a greater use of coal than at present, primarily to power stations. Electricity generating capacity will be tripled and will be a source of power to areas far outside the boundaries of the region. The large scale development of coal-fired power stations makes it unlikely that the introduction of nuclear power to the region will be an economic proposition before 1970 and probably for a long time beyond that. When it is introduced, techniques in the desalination of sea water, using the excess heat produced by nuclear power stations, might have advanced far enough to make a contribution to the water supplies of Humberside. The gas industry should have continued its technological revolution even further and be producing increased quantities of gas from a variety of sources—new oil gas plants, the methane grid, the North Sea gas-fields.

238. After 1970, North Sea gas, if the present promising indications are borne out, could play a major part in meeting the additional demand for energy which will arise from the economic expansion in the region and in the country as a whole. The economic and social implications of this could have a wide impact and would be particularly important to this region as a major producer and consumer of energy. The region has a special interest in the earliest possible assessment of the potential of the gas-fields and in the energy policy decisions which will need to be taken in the light of this, so that the regional impact can be worked out and planned for.

239. The region is poised, as it was at the beginning of the Industrial Revolution, for a great move forward. The region's resources of energy once again provide a massive spring-board for further advance. The Council emphasises the importance to competitiveness of industry in home and overseas markets of adequate supplies of cheap energy and the need to take this fully into account in energy pricing policies.

7 Industry and Employment — Conclusions

240. The four preceding chapters portray the regional industrial scene. The region is one in which primary and manufacturing industries play a distinctly larger part than they do in the country as a whole. This is not surprising, for the region has advantages which have favoured these industries. The Council considers that in the industry sector the main aim must be to encourage a faster rate of growth in production by the region's traditional industries, and at the same time to stimulate development of new ones.

241. The information in the preceding chapters has obvious limitations; it is heavily dependent on employment figures, but other information about production, incomes, industrial building and industrial movement has been taken into account.

242. Additionally, the Economic Planning Council initiated a regional industrial enquiry, which was undertaken on its behalf by the regional organisations of the Confederation of British Industry and the Chambers of Commerce, the results of which have provided further information which has also been used.

243. Geographically, the region is well placed within central reach of the large domestic market for primary and manufacturing products, and it has access to overseas markets through major ports, notably Hull and Liverpool. The provision of really adequate road communications, especially to the ports, would turn the region's geographical position to even greater advantage in this respect.

244. There is the inestimable advantage of a wide range of well-established industry, and much experience and expertise derived from a long history of industrial development and advance. There is ample space in the region for existing industry to re-house itself and for new industry to become established and to expand, both in the less populated eastern half of the region and also, if the available land is wisely used, in the western half as well. The region is also rich in sources of power and energy far in excess of its own requirements.

245. It might seem that with these features in its favour, and with its long record of very low unemployment and of high activity rates, the region has little to worry about, at least in the industrial field.

246. The low level of unemployment and the high activity rates have masked other features of the region's economy which all point the other way. The rates of growth of population and of employment have been relatively slow. There has been a small but persistent net loss of manpower by migration. The pace of capital investment in new buildings is, for the most part, below the regional average and output per person is relatively low. All these factors suggest that the region's rate of economic advance is slower than it could be and any complacent assumption that the region's natural advantages which have served it so well in the past will see it through in the future would be mistaken and dangerous.

247. The manpower budget in Chapter 4 (Table 8) illustrates clearly that the manpower situation will continue to be tight, whereas the results of the industrial enquiry which has been undertaken for the Council show that the region's industrialists are banking on increases in manpower to achieve increases in production.

248. The first need, therefore, is to stem, and in time to reverse, the long established migration trends, and to mobilise and to use the available manpower to the full and in the most efficient ways.

249. It goes almost without saying that the situation will call for the faster application of technological advances in industry and fuller use of modern plant and equipment and up-to-date production methods. Furthermore, some re-housing of production units in new and modern facilities will be necessary, and there needs to be a greater willingness by management to question the apparent short term financial advantages of continuing to operate in old or inefficient buildings. In this region, with its high proportion of small establishments, the necessary changes may well depend upon further rationalisation of production.

250. This will call for a special effort and a change in attitude at management levels as well as on the shop floor, which could set a higher and more challenging pace, attractive to younger management who otherwise might be tempted to view their future as belonging to other parts of the country where, rightly or wrongly, the challenge and the opportunities seem to them to be greater. It will also call for the vigorous expansion of vocational and industrial training schemes of all kinds.

251. The second urgent need is to improve the whole industrial environment. According to the industrial enquiry, many firms in the region regard the poor environment as a disincentive to their own growth. It also, no doubt, inhibits the establishment of new firms. One of the factors responsible for the poor environment is the extent of industrial dereliction.

252. The third important need is to improve communications to make it easier to move production from the factory to the markets at home or to the ports for shipment overseas; and also to make it easier to get to and from work and to reduce the loss of manpower hours spent on buses and trains, or in traffic jams.

253. In these ways—better use of manpower, the improvement in the environment, and of communications—there is much that can be done to step up the economic tempo.

254. Modern and up-to-date equipment and production methods will increase the effectiveness of the manpower of the region, while improvements in environment will help to stem the loss of manpower by migration. There are additional ways in which growth can then be stimulated and built up.

255. In the main manufacturing areas of West and South Yorkshire further growth and change could be encouraged by building up on the industrial investment which already exists, and by expanding the range of production of established industry to incorporate new production ranges which modern technological advances can offer.

256. Some parts of the region, in particular the Coalfield, offer scope for positive encouragement to additional new manufacturing industries, which would result in a better balance of the employment opportunities offered. Other areas have particular advantages which make them feasible points of natural industrial growth; South Humberside obviously so with its facilities for deep-water berthing; Doncaster with its especially good road and rail communications. These areas could help to meet the need of firms already established in West Yorkshire, and, in particular, in the

Pennine towns, to expand in branch factories. Then there are the areas where employment opportunities seem likely to decline, such as those parts of South Lindsey and Mid-Yorkshire affected by depopulation, and in which, if only to a limited extent, industries linked perhaps with agriculture might be encouraged to establish themselves in the small towns.

257. Such developments do not happen by themselves; they need to be stimulated. The Council has already recommended to the Government that the region should be given help to bring about these developments. The Council does not consider that the region should be treated for investment incentive purposes in the same way as the development areas, with their particular unemployment problems; but it takes the view that the relatively slow pace of growth in the region and the problems which are seen to lie ahead justify more help for the region than is allowed by the present policy which places the region on the same footing as the Midlands and the South East.

258. A differential rate of investment allowance, not as high as that for the development areas but higher than that which is provided for the Midlands and the South East, seems, in the Council's view, to be justified. In any case, the Council considers that a more flexible distribution-of-industry policy is needed to help the region. While, during the last year or two, no firm already established in the region has been refused an industrial development certificate for expanding its activities, the Council believes that a negative policy which confines itself to not obstructing the expansion of industrial undertakings in this region is not enough. What is needed is a positive policy of encouraging industrial developments which are of such a kind and in such places as will meet regional needs.

259. The analysis in the four preceding chapters has been based on projections up to 1971 only. There are, however, two problems relating to developments beyond that time on which early decisions need to be taken.

260. The first of these is the extent of the new urban area or areas to be developed on Humberside, which must form the basis for orderly planning of the great industrial potential of the eastern half of the region. The second, referred to in Chapter 6, is the working out of a national energy pricing policy which will take account of new sources of energy. This policy decision will have economic and social implications for the energy-producing industries that are a major feature of this region, and will affect the competitiveness of the region's industries dependent upon ample supplies of cheap power.

8 Communications

261. Communications are of crucial importance to the region, with its central geographical position, containing the eastern half of the oldest and most intensive industrial belt in the country, and offering prospects of substantial economic development on Humberside. The region's economic effort needs to be backed up by a transport system adequate to meet the heavy demands for the speedy and efficient movement of raw materials and production to and from its industrial centres within the region and the rest of the country, as well as providing for the movement of its population within and between its urban centres. The outstanding problem is the severe overloading of the existing roads, especially those linking the industrial heart of the region to the Humber ports and to the west over the Pennines.

262. Only a bold and imaginative programme of road improvements can reduce this problem to manageable size. This will take time, and perhaps a long time. Meanwhile, congestion will increase progressively and traffic increases will continually overtake road improvements.

263. There are, however, two basic factors making the present situation even more serious than it need be and about which something can be done in the shorter term. First, because the railways are, in general, seriously under-used, there has been a tendency for them to prune their services for the sake of economy rather than extend them. Secondly, there is a lack of co-ordination of passenger and freight traffic over the road, rail, waterway and air systems of the region.

Traffic Flows

264. A quick indication of the existing loading of the road and rail systems in the region and between the region and the rest of the country is given in Figures 22, 23 and 24.

265. This load comprises: (i) traffic moving through the region, starting and ending outside its boundaries; (ii) traffic originating within the region but going beyond it, or originating outside it but destined for it; and (iii) traffic going between places within the region. The first has little bearing on the region's economy but is an important element in the use of certain roads.

266. More needs to be known about these traffic flows, but the main through traffic—category (i)—goes from north to south and is carried chiefly by the A1 main road running the length of the country and by the east coast main railway passing through the region via Doncaster and York.

Road Congestion

267. The A1 is already heavily loaded. Substantial lengths of this road within the region were carrying over 30,000 passenger car units a day in the West Riding in 1965 (against a theoretical capacity of 25,000 a day) and a quarter of this traffic consisted of slower moving heavy goods vehicles. The road will be relieved to some extent by the completion by 1968 of the M1 which will provide direct motorway links between Leeds, Sheffield, the Midlands and the South. This, however, in the Council's view, will create a further problem in providing for the flow of traffic from the new northern end of the M1 at Leeds to the north, and, in particular, to Tyneside and Tees-side.

268. So far as the north/south flow of road traffic is concerned, the existing roads, or those programmed, will, in the Council's view, still fall seriously short of the need in the immediate future. Moreover, in the Council's view, congestion will increase and the A1 as it is now constructed, and within the practical limits of improvement, will need all the relief which a

continuation of the M1 north from Leeds could provide.

269. Figures 22, 23 and 24 show that some of the heaviest traffic moves to and from the industrial centres of the region over the Pennines to the west and to Humberside in the east. The main flows are between the West Riding and Lancashire, and to and from Sheffield and the Midlands, with heavy loading along both sides of the Humber to Hull in the north and to Scunthorpe and Grimsby/Immingham in the south.

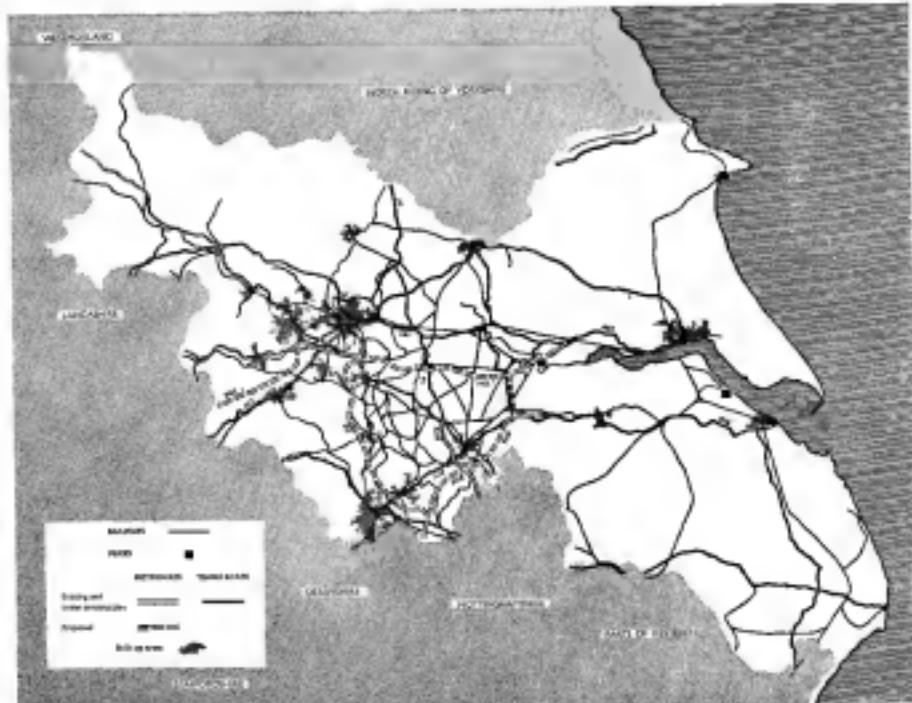
270. There are at present five main roads across the Pennines in addition to several smaller classified roads—all of them already over-loaded. There are welcome plans for their improvement and, in particular, the completion of the Yorkshire/Lancashire Motorway—the M62—will help to ease matters for traffic from the West Riding conurbation to South Lancashire. The motorway will, however, not give much relief to traffic going north-west

to Scotland and to the towns of north Lancashire, nor will it greatly help traffic between Sheffield and Manchester.

271. To the east the A18 between Doncaster and Thorne carries about 18,000 car units a day on a mostly two-lane road designed for a capacity of 6,000 under free flow traffic conditions, and no less than a third of this traffic consists of vehicles of over one and a half tons. On the A63 between the Leeds area and Hull, these vehicles comprise two-fifths of the traffic. A new network of motorways is to be constructed linking the Humberside area to the West Riding conurbation, and this will in due course give some relief. Congestion extends to the roads running east/west on both sides of the Humber, and the relief of this has a vital bearing on the development of this part of the region. The future motorway needs of the area must be taken fully into account in planning the large scale development on Humberside.

Fig. 21 Communications, mid-1966

The railways shown are those in use, and the road proposals those approved or under consideration. Motorways and trunk roads referred to in the text are numbered.



Unused Rail and Waterway Capacity

The Rail System

272. In contrast to the gloom of road congestion, there is under-use of the region's rail system which, if remedied, could make a significant contribution to easing the problem. In the Council's view, further relief could also be given by making more use of the important commercial inland waterway system which the region possesses.

273. British Railways fully recognise the importance of the trans-Pennine routes between Leeds, Sheffield and Manchester. Two routes have been chosen for long term development. One is the Leeds-Hebden Bridge-Manchester route, to carry traffic from the east side of the Pennines to the north Manchester area and north Lancashire, which will also provide a through link between the West Riding and the main Anglo-Scottish west coast route at Preston. The other is the electrified Sheffield-Woodhead-Manchester line, which will be designated as a major freight route connecting

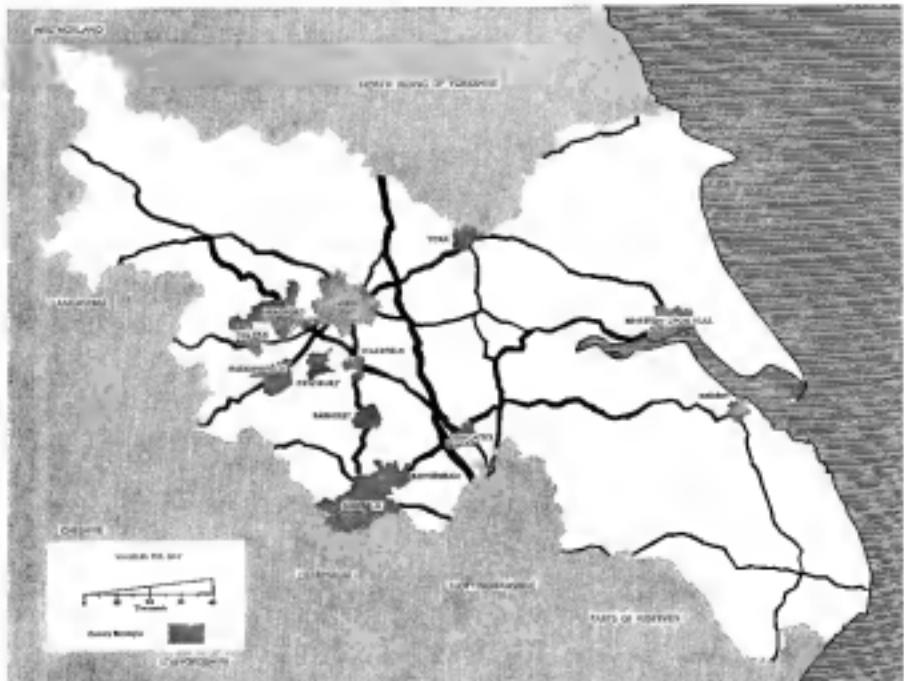
the South Yorkshire and East Midland coalfields with the industrial areas of South Lancashire and North Cheshire.

274. The West Riding and Humberside have good rail links with each other and with the Midlands and the south through York, Doncaster and Retford, and rail routes provide for the needs of the great power station complex now planned or under construction in the Pontefract/Selby/Goole area. Rail communications to South Lindsey are less economical and are possible selections for closure under the railways reshaping programme. This is an area which is threatened by the problem of rural depopulation and any such closures must be carefully considered in the light of the available alternative means of transport.

275. In its report, *The Reshaping of British Railways*, the Railways Board mentions five possible inner train terminals in Yorkshire and Humberside. Three full-scale terminals are proposed at Leeds, Sheffield and Hull, and smaller ones at Grimsby and Doncaster. Those at Hull, Grimsby and Doncaster would be

Fig. 22 Trunk Roads: Density of Traffic, 1961

Compiled from the latest complete Trunk Road Traffic Census taken by the Ministry of Transport. The volume of traffic (expressed by the width of the lines) is the average for a 16-hour day over the period 21-27 August 1961 (i.e. prior to the opening of most sections of motorway).



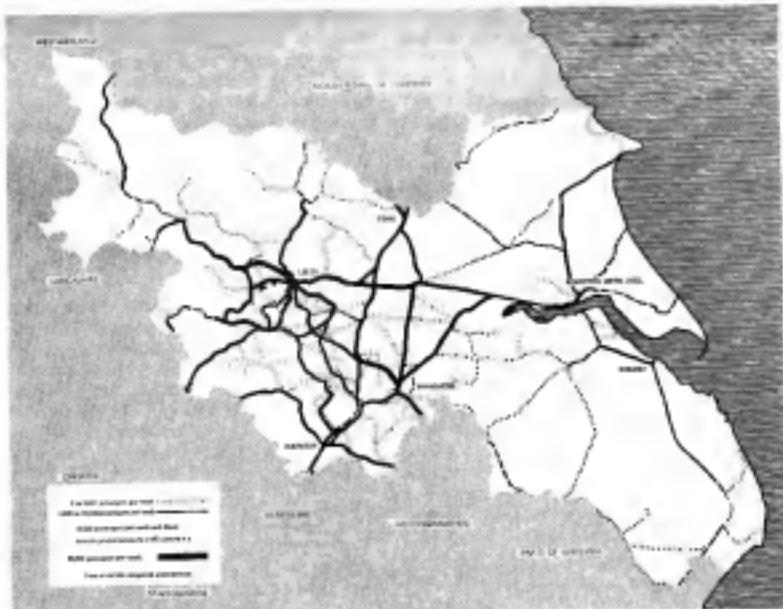
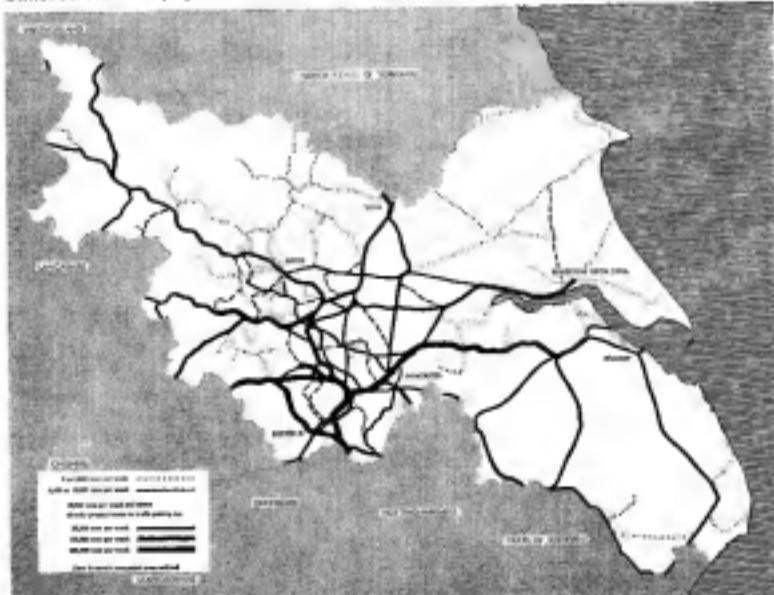


Fig. 23 British Rail: Density of Passenger Traffic, 1981

This map shows the pattern of traffic in 1981 and thus covers some services which have since been withdrawn.
Derived from *The Reshaping of British Railways* by permission of the British Railways Board.

Fig. 24 British Rail: Density of Freight Traffic, 1981

This map shows the pattern of traffic in 1981 and thus some lines which have since been closed are included.
Derived from *The Reshaping of British Railways* by permission of the British Railways Board.



likely to make a direct contribution in easing road congestion on Humbershire and the two others, at Leeds and Sheffield, would help to improve traffic facilities across the Pennines as well as in the region as a whole.

Waterways

276. The main elements of the waterways system, and their traffic volumes, are shown in Figure 26. They are:

- a the Aire and Calder and Hebble system (84 miles);
- b the Sheffield and South Yorkshire Navigation (43 miles);
- c the lower part of the River Trent (26 miles);
- d the Yorkshire Ouse.

277. The first two form an important link between the industrial centres of the West Riding and the Humber, while the third is increasingly used by coastal traffic serving the Scunthorpe steel industry and provides a link to the East Midlands; the lower part of the Yorkshire Ouse serves as a dredged channel for the important coastal trade to Goole.

278. The unique character of these waterways justifies a detailed description of their facilities and possibilities.

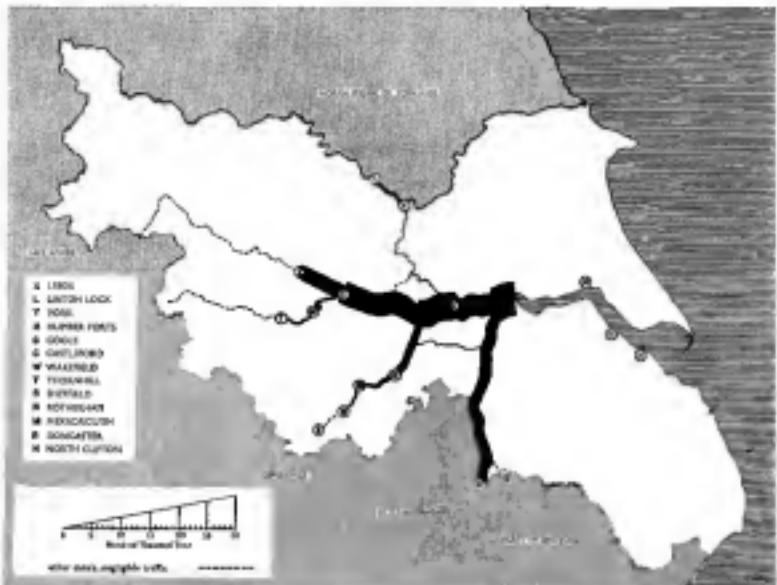
279. Apart from the Manchester Ship Canal, the Aire and Calder Navigation is probably the most important canal in the country. Normal craft of up to 300 tons, specialised craft approaching 600 tons and trains of compartment boats, known locally as 'Tom puddings' and carrying a total of about 700 tons, can use the main line. In 1965, 3-4 million tons were carried on the Aire and Calder, mostly local coal for power stations near the canal banks, plus imports of oil and general cargo for West Yorkshire.

280. The lower length of the Calder and Hebble Navigation, from Wakefield to Greenwood Lock, near Dewsbury, is used by considerable commercial traffic passing to and from the Aire and Calder; it also supports a useful internal coal traffic from Castleford to Thorne power station. In 1965, about 138,000 tons were carried on this lower length.

281. The Sheffield and South Yorkshire Navigation, which carried just over one million tons of traffic in 1965, links the heavy industries of the Sheffield, Rotherham and Doncaster area to the Humber ports, carrying the same sort of traffic as the Aire and Calder. Part of this canal is at Haxthorpe, just above Doncaster.

Fig. 26 Inland Waterways: Traffic Volumes, 1965

Carried from statistics provided by the British Waterways Board. The volume of traffic (represented by the width of the line) was the total flow during the calendar year. Traffic from the Humber ports is shown from the confluence of the Trent and the Ouse.



can be navigated by the trains of compartment boats, and by normal craft of up to 250 tons; beyond this point navigation is possible only to craft of up to about 90 tons. Vessels using these three important canals of the British Waterways Board can and do go to Hull and Immingham as well as Goole.

282. The Lower Trent, from Gainsborough to Trent Falls, is used primarily for import traffic of two main types. A new and growing element is coastal shipping and trade from Western Europe travelling via the Humber to Keedby and Flixborough. This traffic is steadily increasing; inward traffic in 1964 totalled 339,157 net registered tons (about 27 per cent higher than in 1963). There is also a considerable movement of barge traffic, mainly coal and petroleum, from the Humber ports to Newark and Nottingham on the British Waterways Board's Trent Navigation (which extends from Gainsborough to Shardlow) and most of this traffic, which amounted to over one million tons in 1965, also passes over the lower part of the river.

Balancing the Load

283. In face of the acute problem of road congestion, which cannot be effectively relieved at least for some time, it is clearly desirable that the maximum use should be made both of railways and waterways systems. The extent to which these, rather than roads, are used depends upon the commercial decisions of industrial undertakings, including public corporations. In the Council's view the regional need is so great that it may be necessary to consider the introduction of incentives and special measures in order to bring about a better balance of the heavy load which has to be borne by the region's communication systems as a whole.

Pipelines

284. Pipelines for transporting bulk traffic to and from the ports also have their contribution to make. They have not so far been widely developed in this country. They tend to be high capital-low running cost devices which must have big throughputs to be cheaper than the traditional transport systems. Though used chiefly for liquids, solids can also be carried by pipelines in liquid suspension, as, for example, chalk and clay from quarries to the Melton Cement Works near North Ferriby on the Humber; or pulverised fuel ash from the Ferrybridge and Eggborough power stations to Galt Common three miles south-east of Knottingley.

285. Further research into the possibilities of pipeline systems, their cost evaluation and the contribution which they can make as an element in the transport system of the region should, in the Council's view, be given every encouragement.

Port Facilities

286. Adequate facilities for the movement of people and goods into and out of the region through sea and air ports are also of particular economic significance in this region.

287. In Hull, Immingham, Grimsby and Goole, the region has major and expanding sea port facilities. Hull handled over 9 million tons of traffic, worth £500 million, in 1965—general cargo, grain, timber—which gave it third ranking status by value of trade in the whole country after London and Liverpool. Immingham deals with over 5 million tons a year, including basic materials of the highest importance to the region—coal, petroleum, fertilisers and sulphur. Goole took care of 1.6 million tons of coal in 1965 and another three-quarters of a million tons of other cargo.

288. The schemes for expanding these facilities are rightly on a large scale. At Hull, expansion projects totalling £7 million are in hand, with much large scale development in prospect. Further expansion is underway and contemplated at Immingham (including roll on—roll off facilities), and at Hull and Grimsby; all will increase the part these ports will play in matching the economic development of the region. The Council attaches special importance to maintaining this impetus and has warmly endorsed the proposals in the 1965 Interim report of the National Ports Council, *Port Development: an Interim Plan*.

Air Transport

289. No other comparable concentration of population and industry in the country is so inadequately served by airports and air services as this region. There is at present only one civil airport of any size in the region. This is at Yeadon, to the north of Leeds and Bradford, well placed to serve the West Yorkshire industrial area (see Figure 26). Traffic through this airport has shown considerable advances from 45,000 to 274,000 terminal and transit passengers per year over the period 1959-65. Freight has increased from 350 to 1,310 short tons per year over the same period. Scheduled and charter services are now provided both domestically and to Western Europe. Facilities have been extended and there seems to be plenty of scope

for the expansion of services from this airport, although there are serious physical limitations at Yeadon to further expansion of the airfield as such.

290. This gives greater significance to proposals to build further airports or to provide airport facilities in other parts of the region: at Todwick near Sheffield; at one of various places on Humbershire; and at York. Some of these proposals, e.g. for an airport at Todwick, relate to a major airport on the Yeadon scale and possibly larger. Others envisage the provision of facilities for charter and executive aircraft. Particular importance attaches to providing air services of this kind for business purposes, especially in the eastern half of the region, both north and south of the Humber, with its growing centres of industry and the increasing needs of businessmen to get quickly to their markets, e.g. in Europe, and to maintain close and continuous contact with their agents and customers.

291. As regards the Sheffield proposal, Todwick and Yeadon are relatively close together, but they would each serve a fairly clearly defined catchment area of roughly a million people. The Council attaches importance to the

development of the two airports in such a way as to avoid duplication of facilities, or the spreading of facilities too thinly. The region needs both, but they must complement and not weaken each other's contribution.

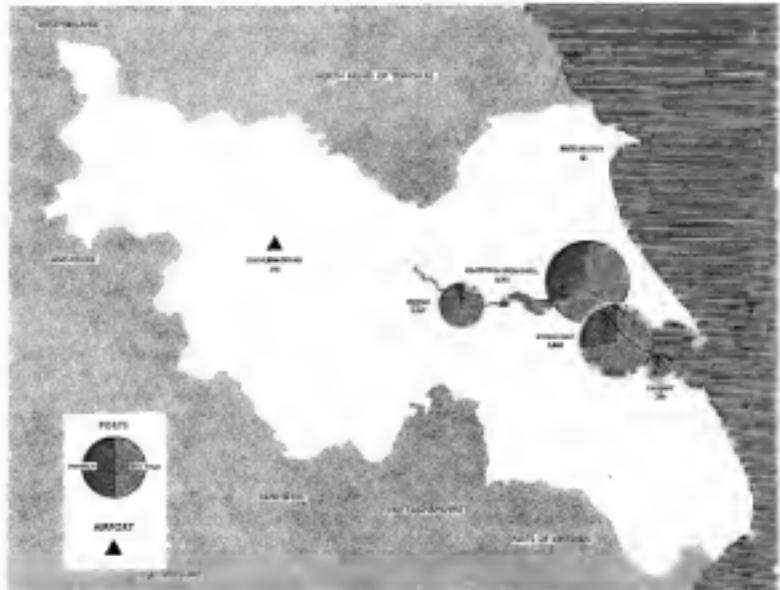
292. In the Council's view, there is a clear case for an airport on Humbershire, carefully sited to serve both banks of an area of rapid growth potential. There are fortunately several possible sites available.

293. So far, the provision of services to points no more distant than Western Europe has been considered. The Council notes that there are no plans at present to provide any alternative to Ringway Airport as a centre for flights from the north of England to places farther afield.

294. In the Council's view, there will be a need for an alternative airport in northern England clear of the increasing congestion at London, and a strong case can be made for providing the alternative to the east of the Pennines. The Consultative Council for Airport Development in Yorkshire and Humbershire has already proposed that a possible site for such an airport should be selected now and safeguarded for the time when it will be needed.

Fig. 26 Ports and Airports: Traffic, 1965

The total inward and outward cargo handled in 1965, in thousands of tons, is given in figures under the name of each port. It is represented by the area of the circles, the sectors of which indicate the proportions accounted for by petroleum and dry cargo (including coal). The number of terminal air passengers in 1965, in thousands, is given under the name of the airports.



There are several possibilities, not all of them within the Yorkshire and Humberside Region. While the matter may not be of immediate urgency, it needs and is receiving further attention by all three economic planning councils in the North.

Traffic in Towns

295. So far, the problems discussed relate to the means of transporting people and goods between the centres of industry and population in the region, and between the region and the rest of the country. A sombre picture is presented of some systems crucially overstressed and others under-used. It is necessary to turn now to a problem which is facing all the major towns of the country, that of urban area transport.

296. This region faces the problem in its acutest form. It has been estimated that the number of vehicles on the roads in this country will double in the course of the next fifteen years and this region will certainly bear its full share of the increasing demands for urban road space. Over the two years 1962-64, the number of cars registered in the region rose from 489,000 to 623,000, an increase of no less than 24.8 per cent compared with 11.6 per cent for the country as a whole. Even this did not bring the car density of the region up to the national average—7.5 people per car in the region in 1964 compared with an average for the country as a whole of 6.4. This suggests that the region, inside town centres as well as outside, has yet to face the full impact of increasing car ownership and all the road transport difficulties this will bring.

297. Already in the major towns congestion is acute and, in the Council's view, swift and bold action is necessary to ward off the worst that further increases in the number of vehicles will bring.

298. It is essential, in the Council's view, to push ahead with a programme to encourage the full application of modern road traffic management techniques in built-up areas; for example, the provision of 'peak and ride' facilities, bus feeder services to commuter railway stations, routing of traffic in towns, all with due regard for the environmental consequences which must not be overlooked.

299. The problems of developing and applying co-ordinated planning to highways transport, and traffic problems in a large city, are already being examined in the region at Leeds. The Council attaches the highest importance to the results of this work, which it considers to be urgent and which it hopes will proceed as speedily as possible. In the Council's view

only the most imaginative steps towards regulating the number of vehicles in the urban centres, taking realistic account of the available roads and of the available space for urban road construction, can save the large centres of population in the region from traffic congestion which is intolerable in itself and could crucially sap the strength of the region's economy.

300. The economic significance of this problem is heightened in a region in which the shortage of labour is likely to be one of the major threats to economic advance. The free movement of people from home to employment is of special importance.

301. In the West Riding conurbation, where the north-south (M1) and trans-Pennine motorways will intersect, there is a need to devise a modern road pattern for the conurbation to make the most of the national motorway and trunk road programmes. The comprehensive land use-transportation study of the conurbation, for which arrangements are now being made, is therefore of the greatest importance.

Recreational Transport Needs

302. All the emphasis up to now has been on movement of people and the movement of the goods which they use and produce. Stress has properly been laid on the vital relationship between the communication and economic problems of the region. But people play as well as work, and the needs of adequate communications for recreation are also more closely related to the achievement of economic objectives than is sometimes recognised, as Chapter 10 shows.

303. The region is endowed with many areas which provide excellent recreational facilities. This is an asset of which the fullest use should be made. The National Parks areas and the Pennine beauty spots, as well as the attractive coast resorts from Skegness to Bridlington and beyond the region to Scarborough, are all attractive and of special value to those who live and work and make their economic contribution in the industrial and heavily populated parts of the region. If the people of the region are to get full benefit from these places they must, however, be able to get to them without the stress and strain of congested travel conditions.

The Humber Bridge

304. It is appropriate that a chapter which has emphasised the importance of adequate com-

munications to support the region's economic development, and which has shown clearly that much needs to be done to catch up on what has not been done in past years, should come to an end with a reference to one piece of roadway which has been talked about inside and outside the region since the middle of the last century—a bridge across the Humber.

305. The Council identified a Humber bridge as necessary for the region's development within a few months of beginning its work. It saw the bridge linking North and South Humber-side, and its associated road network connecting the area to the major roads to the west of the region, as essential elements in the region's development—playing a double role. First, to provide for an expansion of population and industry in the Humber-side area, and, of equal importance, to stimulate the economic development of this part of the region which, in the Council's view, can and will make a decisive contribution to stepping up the rate of the region's economic growth. The Council is encouraged by the Government's decision to make Humber-side the first place for study of large-scale future planned expansion.

306. The Council recognises that it would be five years or more before a bridge could be constructed across the Humber even if an immediate decision were taken to proceed at once and urgently. In the interim period a marked improvement of the present inadequate facilities for crossing the river is urgently called for.

Conclusions

307. Without doubt, adequate means of communication are one of the region's most pressing needs, and failure to provide them threatens seriously to retard its economic growth.

308. In the Council's view the present communication systems, the means of moving people and freight about the region and in and out of it, are in many respects seriously inadequate.

309. More people, more cars, more economic growth and more freight traffic, increase of overseas trade through the region's ports, to say nothing of the consequences of the expansion which can be expected on Humber-side, can only mean that, so far as the road systems are concerned, within and between towns, and to the ports, congestion will get progressively worse.

310. The present situation and the prospects for the future clearly call for an imaginative programme of new road construction. There

are a number of important road programmes already planned, notably the M62 motorway and the completion of the M1, but the Council recognises that the cost of a really adequate road network would be extremely heavy. It is impelled, however, to stress the seriousness and urgency of the requirement.

311. The Council further draws attention to the particular needs of this region which have been described in this chapter, not least those which will arise, over and above everything else, from large scale development of the Humber estuary, and which it feels justify special consideration.

312. The outstanding need clearly is to proceed as quickly as possible with whatever programme of new road construction can be afforded to the region out of the resources available, and to formulate the regional road programme stage by stage so that the right priorities are given to those road networks that will contribute most to the relief of road congestion and match, so far as it can be made to do so, the planned economic development of the region.

313. Meanwhile, and for the foreseeable future, the primary objective must be to make the fullest use of all the transport facilities available to the region, and to redress the present imbalance between road congestion and the under-use of other forms of transport. This, in the Council's view, calls for the fullest possible co-ordination and, in due course, integration of all forms of transport—road, rail, waterways and air. In the Council's view consideration should be given, if it is necessary to achieve the objective, to the introduction of incentives and special measures to influence the pattern of transport use within the region.

314. This needs to be backed up by urgent studies, such as the pilot studies which have already been organised by the Council in respect of freight movement into and out of Immingham and of passenger transport in the Sheffield area, to identify specifically the scope for further co-ordination and the best methods of achieving it.

315. Looking to the longer term, and in anticipation of it, so that plans are made for meeting the communication needs of the region instead of remedying the consequences of failure to do so, systematic examination needs to be made of the scope in this region for new forms of transportation, for example, passenger underground systems in some of its major towns, monorail systems, and hovercraft in the Humber estuary.

316. The Council wishes to underline the seriousness of the region's communications problem and the threat that this represents to its economic growth.

9 Housing

The Present Position

317. The rapid expansion of industry and population in the region during the nineteenth century has left the legacy of a high proportion of slums and sub-standard houses in unattractive surroundings.

318. The number of houses built and under construction by local authorities and private builders, together with the number of unfit houses demolished, is supplied monthly by all local authorities to the Minister of Housing and Local Government. Details of houses completed for each sub-division of the region in recent years are shown in Appendix A29.

319. The number of houses in the region at present has been estimated by adding to the 1961 census figure the number of houses completed since the census date and sub-

tracting the number of unfit houses cleared in the same period—see Table 10.

320. Between 1st April 1946 and 31st December 1965 the number of new houses built in Yorkshire and Humberside was 440,272 (9.2 per cent of the national total) so that even today some 73 per cent of the region's total housing is of pre-second world war construction.

321. The figures in paragraph 319 are a reliable estimate of the existing housing stock in the region. They do not, however, give any indication of the number of separate households sharing accommodation or living in overcrowded conditions, and to this extent they are not an accurate indication of the way in which people are at present housed. The 1961 census, for example, showed that there were some 14,600 more households than occupied dwellings in the region, the deficit being most serious in South Yorkshire.

TABLE 10

Number of Dwellings in Yorkshire and Humberside, 1961 and 1965

Area	1961		1965	
	No.	No.	Index 1961=100	
Yorkshire and Humberside	1,637,657	1,685,700	106	
West Yorkshire	652,357	652,800	103	
South Yorkshire	233,677	248,100	105	
Yorkshire Coalfield	229,601	246,900	107	
Mid-Yorkshire	126,229	136,600	109	
North Humberside	147,787	166,700	106	
South Humberside	91,082	98,000	106	
South Lindsey	47,983	51,600	107	

322. It is not possible to bring these figures up to date until new census information becomes available. Moreover, the census definition of a private household as 'one person living alone or a group of persons living together, partaking of meals together and benefiting from a common housekeeping' may itself lead to an understatement of overcrowding; it does not take account of families living in homes which are too small for them, nor does it appear to take fully into account the standards of overcrowding prescribed in the Housing Acts. In 1981, for example, some 5 per cent of the population of the region were living in households at a density of more than 1.6 persons per room. This overcrowding is not evenly distributed throughout the region, nor is it concentrated in any particular subdivision; it is severe in widely scattered areas such as Hull, Bradford, Hemsworth and Thorne.

Sub-Standard Housing

323. There is no single source of statistical information for the extent and distribution of unfit housing. There are in fact three distinct criteria:

- a local authority estimates of 'statutory' unfitness;
- b exceptionally low rateable value;
- c deficiency of normal domestic amenities, namely running cold water, a hot water system, a fixed bath and a WC.

Statutory Unfitness

324. 'Statutory' unfitness is determined by the standards prescribed by the Housing Act 1957, to which local authorities have regard in carrying out their responsibilities for slum clearance. These standards apply not only to unfit houses, but also to groups of houses in any area which, by reason of bad lay-out, the local authority may declare a statutory clearance area and in due course redevelop. There are some 130,000 houses in the region which are thought to fall within the definition of statutory unfitness.

Rateable Value

325. Rateable value provides a reasonable criterion of quality throughout England and Wales as a whole, although there are minor regional differences, and some agricultural dwellings are not included in the rating returns. In 1981 there were some 522,000 houses in Yorkshire and Humberside with a rateable value of less than £30 per annum. Most, though not all, such houses are poor in quality, built before 1914, dilapidated, and situated in areas of high density or bad lay-out; the great majority of them must be regarded as

ripe for demolition and redevelopment as soon as possible.

Deficiency of Domestic Amenities

326. Deficiency of domestic amenities was recorded in the 1981 census, and gives an adequate indication of poor housing quality, though some of the houses concerned may be in good condition and may offer scope for improvement rather than demolition and redevelopment. At the time of the 1981 census there were in the region:

- a 17,983 (1.16 per cent) houses without cold water;
- b 288,023 (19.38 per cent) houses without hot water;
- c 377,544 (24.66 per cent) houses without a fixed bath;
- d 213,381 (13.87 per cent) houses without a WC.

327. Appendix A30 sets out the detailed figures in connection with the foregoing paragraphs in each sub-division of the region and in England and Wales as a whole. Since the last census from which these figures are obtained there will, of course, have been improvements.

328. Any estimate of the sub-standard housing in the region must therefore lie between 138,000 and 522,000 houses. For a number of reasons the Council considers that the higher figure should be adopted: the steady rise in housing standards which has been a feature of recent decades must be expected to continue; the generally poor environmental character of the urban parts of the region demands that high standards should be aimed at; and the omission of agricultural dwellings from some of the statistics argues against any reduction in the figure.

Future Needs for Increased Population

329. Estimates of future housing needs and of the optimum level of future housing programmes depend upon assumptions about future population levels and household size, as well as on estimates of existing housing deficiencies.

330. Estimates of population change to 1981 have been prepared (see Chapter 2) on two bases. The first assumes the retention of all the natural increase of the population now existing in the region, and results in a figure of 5,322,400. The second allows for the continuance of outward migration and results in a 1981 population of 5,187,100.

331. The 1981 regional average household size was approximately 2.9. It has been assumed

that a substantial rise in the population of the region must be accompanied by some marginal increase in household size, and for the purpose of estimating the number of houses needed to accommodate the 1981 population a household size of 3.0 has been adopted. A basis of one dwelling per household has also been assumed.

332. Small adjustments have to be made to the estimates to allow for population in institutions, and for vacant dwellings.

333. On this basis the number of houses needed in 1981 is likely to be between 1,743,800 and 1,790,200 according to which basis of population estimate is adopted. With 1,615,700 houses already existing, the number of additional houses required by 1981 lies between 128,100 and 174,500.

Future Needs for Replacement

334. In addition new houses will have to be built to replace houses which cease to be available for reasons other than unfitness or obsolescence. As shown in paragraphs 323-28, the number of sub-standard houses lies within a very wide range, between 138,000 and 622,000. The allowance for replacement for other reasons (roadworks, central area development, etc.) is an arbitrary figure; 2 per cent of the total number of houses required to accommodate the 1981 population has been adopted.

335. From these data it is possible to determine the range within which the regional housing programme for the period should fall; there are four points in the scale:

- a. the lower 1981 population estimate with the minimum replacement of sub-standard houses gives a total of 300,000 houses needed in 1985-81, an annual rate of 18,800;
- b. the higher 1981 population estimate with the minimum replacement of sub-standard houses gives a total of 347,300 houses needed for 1985-81, an annual rate of 21,700;
- c. the lower 1981 population estimate with the maximum replacement of sub-standard houses gives a total of 684,000 houses needed in 1985-81, an annual rate of 42,800;
- d. the higher 1981 population estimate with the maximum replacement of sub-standard houses gives a total of 731,300 houses needed in 1985-81, an annual rate of 45,700.

Details of these calculations are set out in Appendix A31.

336. It must be emphasised that in this chapter only the sociological aspects of housing need are considered. Other factors, such as the encouragement of industrial expansion in particular areas, or the redeployment of manpower within the coal industry, may from time to time create special housing needs which will have to be met (as they have been in the past) by special provision outside the normal housing programmes of local authorities. The figures in the previous paragraph provide only for increased population, the relief of overcrowding and the existing housing deficiencies, and the replacement of existing unfit and sub-standard housing.

Future Programme

337. The housing achievement of the region in recent years suggests that it should be theoretically possible to reach the highest target disclosed in paragraph 335 — 730,000 new dwellings by 1981. Whether this will be economically possible must depend to a large extent on the growth of the prosperity of the region during the period. There are, however, more tangible considerations which may determine progress; these are land availability, the capacity of the building industry (see Appendix D), and the uneven distribution of sub-standard housing throughout the region.

338. While it is obviously necessary that local authorities should constantly review the situation, present information suggests that the availability of land is not likely to be a factor which will seriously interfere with the achievement of a high rate of housing. Of the bigger towns, only Hull, Sheffield and York seem likely to be unable to accommodate their estimated 1981 population within their present boundaries, and in the case of Hull and York there appear to be no physical objections to controlled peripheral expansion as a possible solution.

339. The recent decision of the Minister of Housing and Local Government to extend the boundary of Sheffield C8 to include the Mosborough area to the south-east of the city will have the effect of relieving Sheffield's shortage of housing land. But until detailed plans for the development of the new area are prepared, it remains uncertain whether Mosborough, together with the areas allocated for housing in town maps in the adjoining county area, will meet the city's needs up to 1981. Present estimates of housing need suggest that it may, but it is clear that Sheffield is a special case which will need additional consideration in the next few years.

340. In some of the smaller towns of West

Yorkshire the clearance of sub-standard houses on steeply sloping sites in narrow valleys creates special problems, and often heavy financial burdens, for the local authorities. Complete clearance or redevelopment to modern standards, where it is physically possible, is very costly. Alternative forms of treatment are unsatisfactory and often expensive, and it is usually difficult to find other suitable sites for local authority housing in these areas. While this problem is limited to a comparatively small number of local authorities it is nevertheless real, and it must be for consideration whether new houses which could be more cheaply and conveniently provided elsewhere should continue to be built in these areas. This problem cannot be divorced from the same type of problem which faces industry in these towns.

341. In recent years this region has a good record for industrialised house building (which in this context includes rationalised traditional methods as well as fully pre-fabricated component building). At the end of 1965, thirteen firms in the region were carrying out contracts for the building of some 10,400 houses, and during 1966 two 'housing consortia' will begin operations: the Yorkshire Development Group will start on a contract for 4,600 factory-built houses in Leeds, Sheffield and Hull; and the West Yorkshire Housing Authorities' Group will start a programme of about 900 houses, which is capable of extension. The future for industrialised building in the region appears to be very good, and with the full use of both industrialised and traditional resources it is possible to be optimistic about the capacity of the building industry to meet the demands which the future housing programme is likely to make.

342. The administrative and financial difficulties involved in increasing the regional housing programme to 730,000 houses over sixteen years would be very great. Any programme of this size would clearly be affected by the economic prosperity of the region, and the present plateau in productivity is likely to restrict any substantial increase in demand, particularly in the private sector where the full economic cost is borne by owners. In 1965 the private sector accounted for 54 per cent of the regional total, but it is difficult to forecast what the proportion may be over a long period. With greater prosperity an increasing proportion of the population may wish to own their own houses: in the short term, however, social priorities may require an increase in the proportion of new houses provided by the local authorities.

343. An important factor in the achievement of a bigger programme is the fact that some local authorities which in the past have contributed to the high rate of house building in the region have reached, or are approaching, the point of satisfaction of their general need for local authority housing. This position may to some extent be modified by rising standards of living, as local authority dwellings now considered satisfactory come to be regarded as unsatisfactory. Nevertheless it is clear that in future years the need for new houses, particularly local authority houses, is likely to be concentrated on a smaller number of local authority areas than has been the case since 1946. If the maximum programme is to be achieved therefore, an enormous effort will be required by the local authorities in whose areas bad housing conditions are concentrated. The Minister of Housing and Local Government has already encouraged this effort by announcing that he will give preferential treatment in housing programmes to certain priority areas where housing conditions are worst; in this region the areas are the West Riding conurbation, Hull and Sheffield.

Conclusions

344. In the final analysis improved housing and environmental standards must follow, rather than anticipate, increased economic prosperity, and the extent of the eventual demand for housing will be determined by the rate of progress made in other fields. Nevertheless the present conditions are so bad, and the legacy from the past so appalling, that the Council feels justified in calling for the maximum housing programme without delay. In its view the housing strategy for the region for the period to 1981 must be to maintain the rate necessary to accommodate the increasing population and the relief of overcrowding (13,000 houses per year); plus the rate necessary to replace existing statutory unfit houses (8,600 per year); plus the rate necessary for environmental reasons to replace the other sub-standard houses now existing (24,100 houses per year)—a total programme of 48,700 houses per annum. The Council draws attention to the fact that such a programme, while greatly exceeding any achieved in the past, is still less than the region's share (by proportion of population) of the national target of 500,000 houses per year by 1970, and it considers that all possible steps should be taken, including, if necessary, special incentives to local authorities, to ensure that it is achieved.

10 The Physical Environment

345. In a review of 'the whole way of life' in the region these distinct aspects of environment have to be considered. First, the climate, which is beyond the scope of improvement by human agency; secondly, features like the state of the atmosphere, the appearance of the landscape, the buildings among which people live and work, which can be damaged or mended and can also therefore be improved; and, finally, those social facilities which have now come to be an integral part of the way of life—education, health, welfare and recreation. The social factors are considered in Chapter 11.

346. In all these respects it can be said that for the great majority of the population of the Yorkshire and Humberside Region the quality of life leaves something to be desired, and in some ways, a great deal.

Climates

347. Contrary to popular belief, the climate of the region is not markedly worse than in many other parts of the country. Throughout much of the region, climatic conditions compare favourably with those of the adjoining regions and even, save for a slight difference in mean average temperature (from 0.5 to 1°C), with those in areas farther south. There are, however, two exceptions: the densely populated areas, particularly of West and South Yorkshire, where sunshine is often obscured by industrial haze; and the extreme western part of the region, the upper Dales and the Pennine slopes, where topography and meteorology combine to produce frequent heavy rainfall.

Housing

348. The aspect of the physical environment which has the most immediate impact on the majority of people in the region is the condition

and appearance of the houses, the streets and the towns in which they live. The internal conditions of the housing have been considered in Chapter 9, but statistics of unfit and sub-standard housing can give no adequate impression of the drab surroundings among which scores of thousands live in West and South Yorkshire. Despite the progress which has been made in slum clearance in recent years (100,000 unfit houses have been demolished or closed in the region since 1954) infinitely more remains to be done before the environment of the densely populated areas could be regarded as satisfactory.

349. The situation will slowly improve as the terrible legacy of sub-standard housing is tackled. But this will take a long time and there is much that can be done in the interval to improve the appearance of the towns which suffer most from bad housing conditions. Many residential areas in West and South Yorkshire abound in derelict industrial sites awaiting redevelopment or actually cleared for redevelopment but meanwhile left neglected—often for long periods. Great improvements could result if these sites were cleared more quickly; if no economic use can be found for them until the time comes for redevelopment then some expenditure would be justified in converting them into places which improve the amenity of the neighbourhood.

350. Relief from the general drabness and monotony of much of the urban areas of the West Riding would also follow from the reintroduction of a distinctive character to the townships within built-up areas. This would be assisted by the local planning authorities adopting a landscape code for selecting building materials which are related to the locality.

The Cities and Towns

351. There is, of course, the widest variety of

cities and towns in the region and in many the urban environment, except perhaps in respect of traffic circulation, is not unsatisfactory. Unfortunately there are many more where nothing less than wholesale clearance of the shopping, business and industrial areas can bring about any real improvement. An encouragingly high proportion of local authorities have begun over the last ten years or so to rebuild or restore their town centres.

352. The Minister of Housing and Local Government has so far approved schemes for twenty-nine comprehensive development areas in town centres, and a further eight await his approval. Many of these plans are scheduled for completion by the early 1970s. The amount of work needed to bring the town centres of the region up to date varies from town to town, as does the pace at which it is being tackled. Schemes already completed have enlivened the town centres in which they have been carried out; together with those in hand they represent a substantial effort which by the 1970s will noticeably improve the amenities of the region.

Derelict Land

353. The Economic Planning Council recently asked local authorities what were the main problems facing them in improving their physical environment. Ninety-eight of the 143 authorities in the region have replied. The four most serious problems are seen by the local authorities as dereliction of all kinds, lack of recreational facilities, water pollution and air pollution; but first place is given to dereliction and especially the treatment of derelict land. Detailed consideration of the issues involved is therefore justified and will be found in Appendix F.

354. The assistance at present given to local authorities is, in the Council's view, quite inadequate to enable them to deal properly with the problem. The Local Government Bill at present under consideration provides for a welcome improvement by allowing for the payment by the central government to all local authorities, throughout the country, of up to 50 per cent of the cost of appropriate schemes of improvement. This remains, however, considerably less than the assistance given to the development areas. In view of the large scale of industrial dereliction in the region, and the clear evidence given in earlier chapters that it is a grave handicap to the efficient development of industry in the region, the Council feels strongly that there is no justification for the continuance of this differential.

355. The stultifying effect of large tracts of

derelict land falls especially heavily on the small communities of the Yorkshire Coalfield. Their small size not only makes the presence of dereliction so much more immediately noticeable; it also makes it more difficult for the financial resources for clearance to be mustered.

Atmospheric Pollution

356. The distribution of the sources of atmospheric pollution in the region obviously depends on the pattern of settlement, and is influenced by such factors as housing density, the presence of particular forms of industry and the characteristics of the fuel used. The traditional open fire burning bituminous coal in high density housing areas, tends to produce very high levels of pollution. The West Riding conurbation, the Yorkshire Coalfield and South Yorkshire contain the great majority of the houses in the region, together with much coal-burning industry. Moreover, the amount of sulphur in the coal produced by the Yorkshire Coalfield is greater than in that mined anywhere else in the country except the north-west, and is significantly greater than in that mined in South Wales and Scotland; the amount of smoke-producing volatile matter in Yorkshire coal is also high. In the absence of smoke control measures, therefore, the total effect in the densely populated parts of the West Riding is to produce an extremely high level of atmospheric pollution which constitutes a major environmental disadvantage.

357. Fortunately there has been some improvement in recent years. In its Interim Report, *Air Pollution* (Cmnd. 9011) of November 1963, the Beever Committee identified parts of West Yorkshire as a 'block area', subsequently estimated to comprise 376,587 acres and 1,167,914 premises 'where the evils of air pollution are most pronounced and most persistent'. Between the passing of the Clean Air Act 1956 and September 1965, however, local authorities in West Yorkshire had made smoke control orders covering 21.9 per cent of the area and 28.6 per cent of the premises; this compares favourably with progress in other provincial areas where only 15.1 per cent of the 'block areas' and 20 per cent of the premises were brought under control in the same period.

358. Problems of atmospheric pollution also exist outside the industrial areas of the West Riding, but the proximity of Hull and Grimsby to the sea and the association of higher wind speeds with estuarine conditions tends to reduce the effect on general environmental conditions, although careful planning will be needed in South Humberside to ensure that the rapid expansion of the chemical industry does

not create new problems of atmospheric pollution for the residential sections of the sub-division.

389. The general conclusion which emerges from a preliminary examination of atmospheric pollution in the region is that more pressure must be put upon local authorities to exercise their powers under the Clean Air Act. There are also particular problems—the steel industry at Scunthorpe, the chemical industry in the Immingham area, and the Yorkshire Coalfield with its heavy concentration of domestic coal burning—requiring further study. Further detailed information on atmospheric pollution is given in Appendix G.

Water Supply and Sewage Disposal

360. Fundamentally there is no shortage of water in the region. Rainfall is theoretically sufficient to ensure ample supplies for all purposes, but to expand collection, storage and distribution to the extent necessary in the future will be costly. In 1964 the broad picture for the region as a whole was that the surplus of reliable yield from all sources was about 20 mgd (million gallons per day) over total consumption of about 240 mgd. Nevertheless a number of undertakings were already marginally short of water in 1964. Schemes currently proposed will increase supplies by nearly 80 mgd, but unless further schemes are put in hand supplies are expected by 1981 to fall short of demand by some 20 mgd. By the end of the century the deficiency could be of the order of 300 mgd. There is thus a need for currently planned schemes to proceed to completion as soon as possible, and for a survey of the whole region under Section 14 of the Water Resources Act to be carried out as quickly as possible to determine how the water needed by 1981 and beyond is to be provided.

381. South Humberside presents particular problems, which are considered in Appendix H.

382. Water supply and sewage disposal are two sides of the same coin. Much of what is taken out of the river systems and underground sources is ultimately returned to the rivers as sewage effluent. More than half the dry weather flow of badly polluted rivers may consist of such effluent. The result is a deficiency of free oxygen in the water and damage to plant and animal life. When this is accompanied, as it all too often is, by surface scum and unpleasant smell, waterways which could be valuable scenic and recreational assets to the towns and countryside through which they flow are turned into offensive liabilities.

Although large areas of the region escape this blight, many local authorities, especially in West and South Yorkshire and the Coalfield, regard it as a serious problem. Pollution of the severest category is recorded throughout nearly the whole length of the Aire, Don, Calder, and their tributaries. There are other local instances of severe pollution, notably between Beverley and Hull and around Scunthorpe.

383. There is an urgent need for the problem to be examined in a systematic way by the river authorities and all the branches of government concerned, both central and local, so that the costs and benefits of a programme to control water pollution can be analysed and a programme drawn up.

The Countryside

384. This chapter has so far concentrated on the urban problems of the region. One of the region's greatest assets, however, is the richness and variety of its countryside. The region is not densely populated outside the West Riding conurbation and Sheffield/Rotherham, where 49 per cent of the population live in only 10 per cent of the land area. Most city centres are less than three miles from open country and most people's homes are even nearer. There are good opportunities for providing close at hand the great variety of recreational facilities that people look for from the countryside, so long as there is systematic planning and close co-operation between all the authorities concerned, both public and private.

The Countryside and the Big Towns

385. The region's urban areas, in particular the West Riding conurbation and the Sheffield area, present familiar problems associated with the growth of towns into the countryside. In this region as in others, Green Belts have been proposed, the objectives of which have been stated as:

- a to check the further growth of large built up areas;
- b to prevent neighbouring towns from merging into one another;
- c to preserve the special character of a town.

Two Green Belts have been proposed for the region and, pending final approval by the Minister, have been adopted as the basis for planning control (see Figure 27, in pocket). By far the larger is the West Riding County Council proposal, which extends from north

of Leeds and Bradford to Sheffield and Doncaster and includes a variety of areas, from the Pennine foothills in Wharfedale to the rich flat agricultural land in the Vale of York. The term Green Belt as it applies in this case is necessarily relative, for the green is often marred by sporadic development and the belt is discontinuous. It is rarely of high scenic quality, and though the position as seen on the map may appear to be beyond redemption, it should be noted that development is often confined to road frontages and much backland is still open. A smaller Green Belt around the city of York is designed to preserve the special character of the city.

366. A fourth desirable objective for Green Belt policy could be to provide a protected area to give convenient opportunities for countryside enjoyment to people living in the large conurbations. Powers already exist for the implementation of this policy. There is, however, one way in which they might be improved. Although development within the Green Belt is restricted to buildings and uses appropriate to rural areas, institutions standing in extensive grounds are also permitted. It would be desirable to provide for a guarantee of public access to the grounds of large institutions wherever possible.

The National Parks

367. The region has much entirely unspoiled countryside of great variety and beauty. Ten per cent of the area of the region consists of National Parkland, or Areas of Outstanding Natural Beauty with a great variety of scenic attractions, from the limestone mountains of Creven to the fenslands of the Lincolnshire Wolds. These include parts of the Dales National Park, the Peak National Park and the Lincolnshire Wolds and one Area of Outstanding Natural Beauty—the Forest of Bowland. The National Parks Committee has also proposed that Nidderdale, the South Pennines between the Dales and the Peak National Parks, and the Flamborough coast should be protected areas.

368. So popular are the National Parks becoming that there is a serious danger of congestion, particularly as car ownership increases in the next two decades. The Government has, however, made proposals for the provision of Country Parks, within easy reach of the towns and designed to be especially attractive to motorists who wish to take their recreation close to their vehicles. These proposals are of particular importance to the region. They would be centred on some building or site of particular interest or attraction, in an area large enough to give a sense of spacious-

ness and including proper parking facilities, picnic sites and opportunities for walking and playing games. Clumber Park, a National Trust property of 3,784 acres, just over the regional border (in the East Midland Region) might be considered as a prototype of the more extensive Country Parks. It is a designed landscape with the remnants of a ducal mansion and a church, a lake and extensive drives through beautiful and heavily wooded country. There are several country houses with large estates in the region, close to built up areas which might serve as Country Parks. Some of them are already in the hands of local authorities and other public bodies, and the initiative of the West Riding County Council in proposing to acquire Fountains Abbey for this purpose is to be welcomed. The Country Parks should do much to relieve pressure on the National Parks. The more distant parts of the latter will be then better able to meet the need of those who prefer a more solitary, or strenuous, means of recreation.

The Preservation of the Countryside's Amenities

368. The facilities for leisure and recreation offered by the countryside are numerous and varied. They are not, however, improved by the existence of numerous eyesores ranging from former service airfields to abandoned cars. The Government, in its recent White Paper *Leisure in the Countryside* (Cmnd. 2928), announced that grants towards the cost of removing some at least of these eyesores, at present limited to the National Parks, will be extended to the countryside of England and Wales as a whole, together with grants to encourage the planting of trees. This extension is extremely welcome, especially if the grants can be used with some flexibility.

370. A relatively small investment would also go a long way to improve facilities for recreation, for example, on the region's waterways and its natural or artificial stretches of water. Certain rivers with weirs—lands might, at relatively small expense, be used to provide large areas of confined water for water skiing, boating and like activities, while at the same time preserving sufficient quiet stretches for angling—a popular sport in the region. The region has an extensive system of navigable rivers and canals (see Chapter 8). The main urban centres, Huddersfield, Leeds and Sheffield have direct access to this system which extends in the north to the Yorkshire Dales at Skipton and Ripon and in the north-east and south-east towards the Yorkshire and Lincolnshire Wolds near North Frodingham and Glastonbury respectively. The potentialities of these waterways

for leisure should be further developed and increased.

371. There are many other attractions. For example, the region has a wealth of historic buildings and country houses. A regional compendium of all the facilities available, collected into one document with adequate descriptive notes, would be a great asset.

The Coast

372. The region has a long coastline, most of it low and scenically undistinguished by the standards of some other regions, although Flamborough Head has been proposed as an Area of Outstanding Natural Beauty. Coastal erosion is not a serious problem, except at Holderness. The Humber estuary is likely to

become increasingly built over with port and industrial facilities. It will be important to provide during this development for continued and possibly improved public access to the river front.

373. There are several popular seaside resorts: Bridlington, Filey, Hornsea and Withamsea to the north of the Humber; Cleethorpes, Mablethorpe and Skegness to the south. Although at a considerable distance from the main population centres of West Yorkshire, they are accessible and weekend and day visitors are likely to increase in number. But the roads to the more popular resorts and beaches will have to be improved since, with railway closures, most holiday makers will have to go by road. The provision of seaside recreational facilities must be planned so that they do not conflict with the need to maintain as much of the coastline as possible in an unspoilt condition.

11 The Social Environment

374. The social environment determines the quality of life in a region. There are aspects which must be considered in any review of this nature. In particular, education, health, recreation and the arts.

375. In education, as in so many aspects, the region presents little unity, being administered by the county and county borough local authorities, each of which is responsible for provision in its own area, although they co-operate in those fields where it is uneconomic for each authority to make its own provision, e.g. higher education.

Standard of School Buildings

376. According to the School Building Survey of 1962, only Wales and the South West needed more expenditure per pupil to bring their school buildings up to standard. Moreover, Wales and the South West had the strong compensation of having a relatively low pupil to teacher ratio, whereas the East and West Ridings' ratio was somewhat worse than the national average (see Appendix A33).

Pupils Staying on at School

377. Since education is compulsory between the ages of 5 and 16, the important measure of the demand for normal school education is the extent to which pupils remain at school beyond statutory school leaving age. The figures in Appendix A32 show that in January 1964 the proportions of pupils of all ages staying on in the region were substantially below the national average, and there is no sign of the region catching up. The reasons for this state of affairs are not clear. It may have to do with parental attitudes. It may in part be a reflection of a heavier reliance on apprenticeships and sandwich courses in this region than elsewhere;

in 1964, only 2.4 per cent of pupils under the age of 20 were in grant-aided institutes of further education, compared with 4.7 per cent in the country as a whole.

GCE Attainments of School Leavers

378. Appendix A32 gives information about the number and proportion of pupils who left school during 1963-64 with various levels of GCE passes. The proportion of leavers from the Yorkshire East and West Ridings Division gaining certain qualifications was lower than the national averages at all levels shown, and lower also than all other regions but the Northumbrian and Midland, though not significantly lower than other regions in the north of England. The proportion of leavers going on to further education courses was also slightly below the national average. There are also wide variations within the region. In evidence to the Robbins Committee, the West Riding Education Authority reported that investigations made in 1958 and 1961 showed that although a higher proportion of children with an IQ of over 130 were admitted to grammar schools in the Coalfield area than in other parts of the West Riding, a much smaller proportion gained major awards or sought entrance to universities. The conclusion drawn was that social and family backgrounds are continuing to result in a considerable waste of natural ability among children.

Further Education

379. Facilities for higher education in the region are extensive and, in the technical field, are frequently geared to meet the needs of local industry. Local authorities meet on the Yorkshire Council of Further Education, together with representatives of local industry and

of the educational institutions, to co-ordinate the courses offered by the various institutions and to avoid overlapping. The region is well served at the highest level with the three universities of Leeds, Sheffield and Hull, and the recently established university at York. The Bradford Institute of Technology is to be given university status. The Economic Planning Council expects to receive considerable assistance from these institutions in its future work. Three of the newly proposed polytechnics are suggested for the region (at Huddersfield, Leeds and Sheffield), building on already existing institutions.

Vocational and Industrial Training

380. Chapters 4 and 7 emphasised that the region faces, and is likely to continue to face, an overall shortage of labour. A progressive and up to date system of industrial training is essential if the region is to make the best possible use of its manpower. With its long established industries the region possesses a strong craft apprenticeship tradition—the number of boys entering apprenticeship each year is in fact about 10 per cent above the national level and there is a firm base for future development. There has, however, long been a need (as elsewhere throughout the country) to improve the general quality of industrial training. Much remains to be done, but the important progress being made nationally has already had a clear and increasing impact throughout the region.

381. The full implications of the Industrial Training Act which came into force on 12th March 1964, are now emerging in various industries, and the region has contributed at least its fair share in the resulting activity. It has, for example, provided the chairmen of two of the first four training boards set up. The Wool Industry Training Board (since re-named the Wool, Jute and Flax Industry Training Board) based on Bradford, was the first training board to be established and has made a good start. Other major boards for engineering, construction and iron and steel, have already appointed regional or area staffs in Yorkshire and Humberside.

382. There has also been considerable activity in the training field by individual firms. A number of group training schemes have been instituted in the past two years, and there have been interesting developments in operator training in several companies. There is, however, an acute shortage of qualified training officers. To overcome this, many firms in the area have made new appointments during the past year,

and are making use of short 'sandwich' type courses for the training of training officers, which have been made available at certain colleges throughout the country. Courses of this kind are now being organised at four centres in the Yorkshire and Humberside Region, and seem likely to meet immediate demands for places. In the field of management training, an important regional development has been the investigation carried out, on behalf of the Yorkshire Council for Further Education, into the need for, and the possibility of, establishing a residential centre for management courses in the region.

383. With the ready co-operation of both sides of industry, government facilities for training adult workers for skilled employment have almost trebled since the end of 1963. There was then only one government training centre in the region, at Leeds, with 188 places available. Centres have since been opened at Hull and Sheffield. The total number of places is now 573, spread over twenty-six different bodies, with a maximum output of some 1,100 trainees a year. Courses sponsored by the Ministry of Labour are also available in the region to particular groups of persons, either with employers or in technical and commercial colleges.

Youth Service

384. There are in the region as a whole some 380 youth clubs or centres with a nightly attendance of 18,000 (out of a total population of 495,000 in the 14-20 age group). To this, however, must be added many activities which do not work from a club base—the Duke of Edinburgh's Award scheme and voluntary service schemes of all kinds, together with a very large number of national voluntary youth organisations whose statistics cannot be broken down into a regional pattern. The probability is that about one-third of the region's 14-20 age group is in some kind of contact with the youth service, which is about the national average.

Sport

385. Sport clearly has an important part to play in the social environment and regional sports councils are being established to stimulate the orderly development of facilities for sport and recreation in their regions. The Yorkshire and Humberside Sports Council has begun its work and will form a focus of knowledge and advice. It has already begun a detailed survey of facilities for sport in the region.

Health

386. It is obvious that the overall economic performance of the region depends to an appreciable extent on the health of its labour force. Few people, however, realize the size of the economic loss due to absence on grounds of sickness. Over the country as a whole in 1961-62, 163 million working days were lost by men because of absence through sickness and 78 million working days by women. This compared with 8 million lost through strikes in the previous year. (For further details see Appendix I.)

387. These figures represent the loss to the region of an equivalent labour force of about 48,000 men on the basis of a 260-day working year (about 3.6 per cent of the male labour force in the region). If this figure could be halved, an equivalent contribution of the order of 24,000 men to the effective labour force of the region would result. Such an improvement would have a dramatic effect. Whether or not it would be possible remains to be seen, but a co-ordinated effort to achieve it would be well worth while. It would require a number of approaches to the problem, including improved environmental conditions in factories, better management in factories to improve motivation to work, greater use of automation and mechanical power to reduce the amount of heavy work, better occupational medical services, improved general practice, improved local authority health services and especially improvement in the general physical environment.

388. The problem therefore merits close attention, especially as there is considerable statistical evidence that the health record of the working population of Yorkshire and Humberside is somewhat worse than the national average. Two main factors interact to produce the poor health record:

- 1. adverse environment, especially in the home;
- 2. occupational stress, especially in heavy industry and coal mining.

General Influence of the Home Environment on Health

389. Chapter 9 discussed the large number of houses of low standard in the region, lacking basic amenities of sanitation, hot water, etc. The poor environment that such living conditions represent is reflected in the health statistics for different parts of the region. Infant mortality rates in particular are appreciably higher in many places than the national

average. The environmental influence is most clearly expressed in the figures for the post neo-natal infant death-rates. Such deaths are largely the result of infections, and are considerably influenced by environmental conditions. The post neo-natal death-rate in the region ranges from as low as 4 to as high as 12 per 1,000 live births, the highest rates being found in many of the towns known to have the worst housing conditions.

390. Fortunately the environment has improved greatly in recent years in many, but not all parts of the region, but the poor health of many adults today is partly the result of the adverse social and physical environment encountered in childhood, especially during the depression. The medical evidence for improving housing standards and reducing atmospheric pollution therefore reinforces the other arguments put forward for environmental improvement in the region.

391. The vital statistics for 1960-64 in the different sub-divisions are set out in Appendix A34. Nearly all the areas have mortality rates which are in excess of those for England and Wales as a whole, but none of the areas is homogeneous. Within each sub-division, there were local authority areas with notably favourable patterns, and others whose mortality was greatly in excess of the national average. Detailed study shows urban and rural districts to have much the same wide scatter, suggesting that rural slums can be as dangerous and unhealthy as those in towns, and that good environments can be found in both types of area. The indices given cannot do more than present a crude picture. They do suggest, however, that the region may contain areas in which the environmental conditions, and standards of medical care, need particular attention.

392. There are wide variations in the health record of different areas within the region showing that, in itself, it is a basically healthy place in which to live, but that its actual health record in particular spots is less good than it might be because the environment, and especially housing, needs improvement. Furthermore there are many heavy occupations in the region which make great physical demands on the labour force. People working in such occupations are obviously less able to continue working with minor disabilities. A double-pronged attack is therefore needed to improve health, improved housing and environment should be complemented by a more vigorous approach from the occupational medicine side. Managements, too, need to develop better understanding of the relationships between motivation and absence due to ill health.

Health Services in the Region

393. The region has a somewhat smaller number of doctors for its population than the national average. It also has a disproportionate number of the largest medical practices (3,000 patients and over). There is also a considerably lower number of dentists per person and the continued worsening of the ratio is disquieting.

Hospital Services

394. The main responsibility for hospital services in the region is divided between the Leeds and Sheffield Regional Hospital Boards. The areas of these authorities extend into other regions: the Leeds Regional Hospital Area covers a small part of the Northern Region, while nearly two-thirds of the area covered by the Sheffield Board is in the East Midlands Region. In addition there are teaching hospitals at Leeds and Sheffield administered by boards of governors.

395. Two new hospitals are nearly completed, at Huddersfield and Hull, and many other major projects are under way. Preliminary work has already started on a new teaching hospital for Sheffield which will be among the largest projects of this kind in the country. The value of hospital building schemes at present in progress in the region exceeds £20 million.

396. The long-term plan for the provision of new hospital facilities and the extension and improvement of existing services is detailed in the White Paper *The Hospital Building Programme* (Cmnd. 3000) published in May 1966. The emphasis will be on improving services rather than on increasing the number of beds. Moreover a trend has already begun, and may be expected to grow, for those needing hospital care who would in the past have become in-patients to receive treatment as day-patients or out-patients, returning to their own homes after treatment. It is hoped that the domiciliary health and welfare services will be able to play their part in this.

397. In the Leeds Hospital Region the building programme is intended to replace out-dated accommodation and to reduce the present unevenness in the level and standard of facilities in different areas. A significant increase in the number of beds (other than maternity beds) is not expected. The aim is to develop a more rational pattern of services to allow something like the existing numbers of beds to be better situated, more effectively used and supported by improved diagnostic and treatment facilities.

398. In the Sheffield Hospital Region most of

the hospitals are old and require to be redeveloped to modern standards or replaced. There is a particular shortage of maternity beds. The programme for the area aims at the progressive redevelopment of general hospitals, the upgrading and enlargement of existing geriatric hospitals and the provision of some new hospitals for mentally sub-normal patients.

Health and Welfare Services

399. The plans for the long term development of the health and welfare services of the major local authorities are contained in the three successive White Papers, all published under the title *Health and Welfare: The Development of Community Care*, the latest of which appeared in June 1966 (Cmnd. 3022).

400. An analysis of the plans for the sixteen major local authorities in the Yorkshire and Humberside Region shows a marked improvement in the general level of the services by 1976 but, in the Council's view, there may still be a number of deficiencies, as shown in Table 11. It must also be noted, however, that there are several areas in which all or virtually all the services planned are above the national average.

401. There is, however, substantial expenditure planned on homes and special housing for old people and on maternity and child welfare services. In the latter case there is possibly an over-concentration of limited resources. Whereas health centres are still few in number there is nevertheless a welcome increase from seven (in the first revision) by 1974 to fourteen (in the latest revision) by 1978 (see Table 12).

402. Perhaps the most serious aspect of all is that the deficiencies noted in each branch of the NHS tend to be concentrated in the same areas. For example parts of the Coalfield and South Yorkshire which have difficulty in attracting GPs and dentists and of staffing the hospitals are also those which display the lowest standards in hospital building and in the local authority health and welfare plans. The very areas in South Yorkshire which are short of hospital beds for the mentally ill do not possess a single day centre for the mentally ill, and until 1964 had no plans for day centres (although three out of the six have now remedied this). Thus, instead of counter-balancing, poor services are intensified by other poor services.

403. Threecent instruction from the Minister of Health requiring all branches of the National Health Service to work more closely together is to be welcomed.

TABLE 11

Deficiencies in Local Authority Health and Welfare Plans to 1976

Comment	Number of Authorities with this deficiency (out of 56)
To 31st March 1976	
No homes planned for physically disabled or handicapped	8
No hostels planned for mentally sub-normal	3
No hostels planned for mentally ill	5
No social centres or clubs planned for mentally ill	6
No workshops or occupational centres planned for mentally ill	10
To 31st December 1976	
Ratio of Health Visitors to population below average	6
Ratio of Home Nurses to population below average	7
Ratio of Mental Health Social Workers to population below average	6
Ratio of Other Social Workers to population below average	6
Ratio of Midwives to population below average	10
Ratio of Home Helps to population below average	3

404. There is, without doubt, a real need for research into the best way of achieving the maximum benefit, evenly spread, given the resources available.

405. There is also a need to be wholly realistic. Many of the local authorities in the region have seriously inadequate services and will not have achieved the recommended standards by 1976. Moreover, they propose to spend sums which they cannot hope to raise through local rates. In the Council's view, if the existing plans are to be achieved (and even more if improvements are to be introduced) additional help from central government appears necessary, especially as the estimated population increase is rising steadily.

406. Finally, the increasing emphasis on community services makes the need for more

TABLE 12

Health Centres in Yorkshire and Humberside 1965, 1971, 1976

Authority	1965	1971	1976
Yorkshire and Humberside Region	2	10	14
Doncaster County Borough Council	—	1	3
Grimsby County Borough Council	—	1	1
Huddersfield County Borough Council	—	2	4
Kingston-upon-Hull County Borough Council	—	3	3
Sheffield County Borough Council	1	1	1
Lincolnshire, Lindsey County Council	—	1	1
West Riding County Council	—	1	1

assistance both from voluntary organisations and voluntary workers (two distinct concepts) of real importance. Many social services (in the widest sense) could not function without the present support of both of these and it is satisfactory therefore that Cmnd. 3023 (paragraph 4) refers to the role being played and to be played by voluntary bodies.

The Arts and Leisure

407. Facilities for the cultivation and appreciation of the arts generally are inevitably far greater in London than in the rest of the country. Nevertheless, when all allowances are made, the level of activity relative to their size in areas with the population of the West Riding conurbation and the Sheffield area is surprisingly low. The West Riding conurbation cannot find the means to support a symphony orchestra, a major art gallery or a resident professional theatre company. This may be one of the reasons for the region's lack of popularity as a place in which to live, at least among the young and the better educated.

408. There is, however, a great deal of activity in the region, and interest is especially keen in participant activities. There are, for instance, numerous dramatic and musical societies. There is also vigorous creative activity in the visual arts. The West Riding has an international

reputation for the quality of its choral singing although, as the recent report of the Yorkshire Council of Social Service, *The Arts in Yorkshire*, points out, this is in danger with the decline in chapel and church choir singing. But, as the same report also notes, such activities are diffuse, small scale and unco-ordinated. This fragmentation is probably in part due to the relatively low proportion of people in Social Classes 1 and 2, as defined in the Occupational Tables of the 1961 census. It is also almost certainly a reflection of the absence of a single regional centre. The recommendation of the Yorkshire Council of Social Service that a Yorkshire Association of the Arts should be formed to act as a focus for, and stimulus to, artistic developments in the region is therefore

to be welcomed. Similar organisations have been set up in the North East and in Lincolnshire with encouraging results. The association would have an invaluable part to play at many levels. Within the region, it could act as a clearing house for information about artistic activities. But although such an association would provide an invaluable stimulus the fact remains that no significant improvement is likely to be achieved without considerable financial assistance from outside bodies. More direct financial assistance for the arts, from central and local government, is an urgent requirement; but help from private patrons is also needed, especially from industry, which stands to share the benefits from any increase in the quality of life in the region.

12 Summary and Signposts to Action

409. The Yorkshire and Humberside Region presents a wide diversity of conditions. Economic and physical planning problems differ in its various parts. The purpose of this chapter is to summarise the main points which have been discussed in detail in earlier chapters. It indicates the lines along which the Council considers that further action might be taken.

The Region and its Physical Planning Background: Chapter 1

410. The outstanding physical planning problem is the need to improve the environment of the urban areas, particularly in the Yorkshire Coalfield and in West and South Yorkshire.

411. There is plenty of land for expansion, taking the region as a whole, although its availability varies considerably from one part to another and there are particular problems in some areas, for example, in the Pennine valleys where the availability of level sites is limited, and to the east of the A1 where the preservation of agricultural land of high quality is an important factor to be considered.

412. In West Yorkshire, where the demand for land will increase as the housing problem and the need for expansion and modernisation of industry are tackled, there is a special need to keep the position under review. The Council attaches particular importance to a detailed survey of the availability of land for industry in West Yorkshire. It is pleased to note that the Ministry of Housing and Local Government has, in co-operation with the local planning authorities, put in hand a survey to determine the availability of land throughout the region, both for residential and industrial purposes.

413. Road communications in the West Riding conurbation are unsatisfactory and urgently need improvement. There is a pressing need to devise a modern road pattern for the conurbation to make the most of the national

motorway and trunk road programmes that will establish the future role of the West Riding as a focal point in north-south and trans-Pennine road communications. The Council attaches the highest importance to the comprehensive land-use and transportation survey which the local authorities have in hand in conjunction with the Ministry of Transport.

414. The industrial towns in the west of the conurbation, in particular Bradford, Halifax and Huddersfield, are faced with problems associated with relatively low population growth and serious environmental difficulties. The Council considers that action to tackle these problems is urgently needed if these towns are not to be weakened economically, and a firm decision should be taken whether to encourage firms in these towns to develop and to expand in their existing locations.

415. The towns in the Higher Pennine valleys to the west of the conurbation have suffered a decline in population and present a particular and acute problem. The topography is no longer favourable to modern economic activity and the comparatively harsh climatic conditions resulting from the high altitude discourage industrial expansion. The Council considers that this problem requires close consideration to determine whether it will be possible to restore industrial and social vitality to these settlements. If this does not prove to be practicable, the valley bottoms which are by no means unattractive may have a future as residential areas, if the outward signs of industrial obsolescence can be removed in the course of redevelopment.

416. As regards South Yorkshire, the Council considers that the proposed extension of the Sheffield CB boundary should solve the city's short term population problem. It sees the possibility that, in the longer term, it may be necessary to make provision for large scale accommodation of industry and people farther afield. The longer term requirements of Sheffield therefore need to be kept constantly under review.

417. In the Yorkshire Coalfield derelict land is, in the Council's view, the most serious environmental problem. A much faster rate of reclamation of derelict land is necessary if planning aims are not to continue to be frustrated. Many of the villages are unplanned growths of terrace housing related only to the collieries; this, together with the scattered distribution of the settlements themselves, creates a planning problem in the provision of community services and facilities. The Council attaches importance to the closest possible co-ordination of all the plans for developing the smaller towns of the Coalfield.

418. There is no insuperable physical obstacle to the introduction of other industry into the Coalfield. Some difficulty might be encountered in finding sites for industry in the older parts of the field, but in the eastern part, with better contours, better environment, and better communications, conditions would be more favourable.

419. In Humber-side the outstanding need is, in the Council's view, for the north and south banks of the river to be adequately linked so that the natural advantages of the estuary as a whole are realised.

420. The Council notes with satisfaction the Government's decision to put in hand a detailed study of the Humber-side area and that, subject to the outcome of that study, the aim is to enable development to proceed as rapidly as possible. It welcomes the assurance that the Council will be consulted and that full account will be taken of its views.

421. In North Humber-side there is scope for industrial expansion and this should not present serious physical planning problems although the very high quality of some of the agricultural land in the area needs to be taken into account. The Council stresses the urgent need to improve communications within the City of Hull and between the City and other parts of the region.

422. In South Humber-side there appears to be almost unlimited scope for the reception of population and industry. The Council attaches importance to the motorway network being developed as quickly as resources permit to replace the present inadequate links between North and South Humber-side and the rest of the country.

423. In Mid-Yorkshire and South Lindsey the main requirement is the continued development of appropriate small scale industry in the market towns in order to counter rural depopulation.

424. The City of York is a special case with acute planning problems of a local character. A solution to York's problems, in particular

road communications, must, in the Council's view, precede any further expansion, and when expansion can take place, full account must be taken of the importance of the City from the historic and architectural points of view. The Minister of Housing and Local Government has recently selected York as one of the five towns which will be the subject of a special study for the preservation of their historic character.

Population : Chapter 2

425. The rate of population growth in the region is less than that for the country as a whole, mainly because more people move out than in; but also to some extent because of a slightly higher death-rate.

426. If the current trends continue the region's population will grow, but the number of people of working age will not increase to any significant extent and, in the case of women, may even fall.

427. Population trends vary in different parts of the region. In the Yorkshire Coalfield, contrary to the overall regional trend, the rate of natural increase is relatively high, although this has been offset by the loss from migration. In South Humber-side the rate of population increase is higher than in any other part of the region.

428. The region's net loss by migration was small but persistent over the period 1951-65: the average annual net loss was of the order of 7,300. There was an improvement in the trend during the latter part of the period. The loss through migration is mainly of people in the working age group, representing a loss of manpower, including skilled and trained people, which a highly industrialised region can ill afford. The Council considers that a primary objective should be to stem this loss and, in due course, to reverse the trend.

Industry and Employment : Chapters 3, 4, 5 and 7

429. The indications, from the relatively slow rate of growth of employment, together with the comparisons regionally and nationally of output per person, and of investment in new industrial building, are that the region's rate of economic growth could be faster. The primary aim must be to see that it is. Despite the environmental disadvantages in some parts, the region has a number of specific advantages favourable to industry. The region is well placed geographically and there is a wide

range of well-established industries with much experience and a great range of skills. There is ample space for existing industry to rehouse itself and for new industries to become established and to expand. The region is rich in sources of power and energy. These advantages by themselves, however, will not ensure a higher pace of industrial expansion.

430. Manpower estimates indicate only a marginal increase in the labour force over the next five years even if the loss by migration could be stopped, and the Council considers that the most challenging short term economic need is to make the best possible use of all of the manpower available, using it efficiently and flexibly by making more use of modern plant and equipment and up-to-date production methods. It is essential, in the Council's view, that management should adopt a more progressive attitude to the need for changes which will set the example to workpeople and encourage a more ready acceptance on their part of the need for training to higher skills.

431. The Council considers that it is necessary for some existing firms to face up to the need for some rehousing of production units in more modern and efficient premises. There must be a greater readiness to take a hard realistic look at the apparent, and often false, indications of short term financial advantages of carrying on in inefficient buildings on congested sites. Re-deployment of production units in more modern efficient buildings will, in many cases, be of benefit to the firms themselves and will also contribute to lifting the general environmental standard of the region.

432. More modern and up-to-date equipment and production methods will increase the effectiveness of the manpower of the region; improvements in environment will help to stem the loss of manpower by migration. There are additional ways in which further growth can then be stimulated and built up.

433. Despite the overall regional manpower shortage, there are labour reserves in some parts of the region. In the Yorkshire Coalfield there is an overall lack of employment opportunities for women, as well as a lack of variety of employment for men. The introduction of more varied employment should encourage miners in contacting coalfields to transfer to Yorkshire (and Yorkshire miners to stay) because of the employment available for their families.

434. In North Humberside the proportion of women employed is rather low, while there is persistent net loss by migration from Hull and Goole, combined with relatively high rates of unemployment. There is scope for further expansion in manufacturing and other employment.

435. In South Humberside, at Scunthorpe, there is a lack of belief in employment opportunities and reserves of women workers. In Grimsby there are some reserves of male labour.

436. There is scope in the main manufacturing areas of West and South Yorkshire for building up the industrial investment which already exists by expanding the range of production of established industry to incorporate the new production ranges which modern technological advances can offer. There is scope for encouraging scientifically based industries producing components and equipment for incorporation in plant and machinery of the type already manufactured here.

437. In short, some parts of the region, in particular the Coalfield and Humberside, offer scope for the attraction of additional new industries to achieve a better balance in employment opportunities. Other areas have advantages for natural industrial growth; South Humberside obviously so; also the Doncaster/Pontefract/Knottingley area at the centre of good road and rail communications.

438. Such developments need to be stimulated. The Council notes with satisfaction the granting of industrial development certificates to existing firms who wish to expand. In the Council's view, however, a more positive attitude at both national and, often, at local government level is needed to secure more rapid industrial development in growth areas, based on the expansion needs of existing firms as well as on the need for new faster growth industries in places where labour is available or would become available as a result of more efficient use of manpower.

439. As a means of stimulating more industrial development and provision for better representation of the newer faster growth industries in the region, the Council has already recommended that the region should receive favourable investment incentives compared with the Midlands and the South East Regions. It would like to see, as soon as possible, investment grants at a level half-way between the present development area and non-development area grants.

Energy and Power: Chapter 6

440. The region is a large consumer and supplier of energy and power in all its forms. It therefore has a special concern in the earliest possible assessment of the scale on which gas supplies can be expected to become available from the North Sea, and with a national energy policy which will take account of new sources of energy. The policy decisions will have

economic and social implications for the energy-producing industries of the region and for the competitiveness of the region's industries which are dependent upon ample supplies of cheap power.

Communications: Chapter 8

441. Good communications are of crucial importance to the economic growth of the region.

442. The region's roads, within and between towns and to the ports, are already congested and this is likely to get progressively worse over the next five years notwithstanding a number of major road schemes which are already in hand.

443. A bold and imaginative programme of road improvements is necessary if this problem is to be reduced to manageable size. Such a programme will take time, and perhaps a long time.

444. It is crucially important, therefore, to give the right priorities to road networks included in the road programme for the next ten to fifteen years. The Council urges regional priority first for a motorway network opening up access to Humberside, then the improvement of routes across the Pennines to Scotland, to North Lancashire, and between Sheffield and Manchester. In the Council's view, there is also a need for a northern extension of the M1 linking Leeds with the north east via the A1.

445. Traffic congestion in the towns is likely to become progressively worse, and the Council is giving the problem immediate attention. The special problem of the West Riding conurbation, with the junction of the M1 and M62 within its boundaries, has already been referred to. The region's need to make the most of its manpower resources, which will often entail travel to and from work, gives further special significance to easing the problem of traffic congestion in towns as much as possible.

446. In considering the priorities for road improvements in the region, the need to provide the people of the region with ready access to the recreational areas must not be overlooked.

447. There is one specific road requirement which, in the Council's view, is of special significance in relation to future economic development. This is the need to construct, as soon as possible, a bridge across the Humber and to build associated road networks linking it with the region's ports and with the industrial centres of West and South Yorkshire.

448. In view of the road communication problems of the region, it is clearly of the

utmost importance to ensure that the other transport facilities available in the region, i.e. rail, waterways and air, are used fully, by taking effective steps to redress the present imbalance between the under-use of these other forms of transport and the overloading of the roads.

449. The Council welcomes the creation of regional organisations, charged with the task of securing the maximum co-ordination of the use of all forms of passenger transport and of identifying and advertising to industry and to the people the true economic costs of alternative means of transport. In the Council's view it will also be necessary, in due course, to provide for the full integration of all transport services in the region.

450. The waterways system of the region already plays an important part in the movement of goods. It has the capacity to play a greater part.

451. The Council recommends that research into the development of pipelines for transporting solids, and the scope that these might offer for providing a larger contribution to easing transportation problems in the region, should be given every encouragement.

452. There is a need to build up airports in the region. The Council supports the proposals which have been made for the development of an airport at Todwick. It attaches great importance to ensuring that airport development at Todwick is co-ordinated with development of the airport facilities which already exist at Yeadon.

453. The Council sees a special need on the north and south banks of the Humber for charter and private air services for commercial and industrial undertakings in the area, in order to provide the facilities which are essential if their representatives, technical and commercial, are going to be able to move speedily to and from their markets at home and overseas.

454. The Council considers that there will be a need, in due course, for a second major inter-continental airport, additional to Ringway, in the north of England and to the east of the Pennines. The matter is already receiving consideration by the Council in consultation with economic planning councils in adjoining regions. The selection of a suitable site for this airport should not, in the Council's view, be too long delayed.

455. The Council wishes to emphasise the special part which the continued development of the Humberside ports can play in the future economic development of the region, especially in enabling trade with Europe to be expanded.

Housing: Chapter 9

456. The Council considers that about 730,000 new houses are needed in the region by 1981, an annual building rate of about 45,000 compared with some 37,000 in 1965.

457. Such a programme would provide houses for the increased population expected by that date, and would replace all the existing statutory unfit houses and all the houses considered to be sub-standard, i.e. all dwellings of less than £30 annual rateable value.

458. There is the further need to provide houses as an encouragement to industrial expansion in particular areas, and to the re-deployment of manpower within the coal industry. Such provision would be additional to the programme of 730,000 houses mentioned in paragraph 456.

459. The incidence of sub-standard housing varies considerably between different parts of the region, and therefore the achievement of the programme which the Council has put forward will present special problems in those places where the greatest improvements are needed.

460. The programme covers both local authority housing and houses built privately. Success in achieving the programme will call for a full effort in both sectors.

461. The region has a good record for industrialised house building and the future prospects are encouraging. The Council is confident about the capacity of the building industry to meet future demands.

462. In face of the size of the new housing requirements of the region, it will be essential to take full advantage of the means of increasing productivity in house building by continuing and increasing collaboration between local authorities, and by the further expansion of industrialised methods.

Physical Environment: Chapter 10

463. By far the greater part of the region consists of countryside, much of very high scenic quality, and there is no town in the region from which attractive country cannot be reached by a comparatively short journey. But in many places houses are old and shabby, mills and factories are obsolescent, and there is too much which has been left derelict.

464. A great effort is needed to improve the region's towns in the mining and other old industrial areas. This is not only a challenge to the local authorities. The efforts of private householders and commercial owners of buildings in contributing to improvement, as well as those of organisations dedicated to the

improvement of physical environment, should be fully supported.

465. Many local authorities have, over the last ten years or so, mounted a substantial effort to rebuild or restore their town centres, and by the 1970s the results will noticeably improve the amenities of the region.

466. But there is too much derelict land and too many derelict buildings in some parts of the region. Something will have to be done to bring about the required improvement of environment in this respect. The task is a heavy one. The Council welcomes the proposals to make grants to local authorities of 50 per cent of the cost of clearing derelict land. In the Council's view, the adverse effects of low physical environmental standards on industrial development are no serious as to justify making grants available for the clearance of derelict land at the rate of 65 per cent in this region, as is done for the development of industry in the development areas.

467. With one exception, the region has no great immediate problems of water supply. On South Humberside, however, it is already apparent that new sources will be needed. These sources exist, notably the River Trent. Steps are already being taken to deal with the problem of pollution in that river. Progress needs to be carefully watched to ensure that water supply expands in step with industrial development while longer term sources of supply are being developed.

468. The problem of pollution of rivers and streams is not peculiar to the region but is particularly difficult in some parts of it.

469. Air pollution presents another serious environmental problem in the region. Considerable improvements have been carried out in recent years and good progress by local authorities in West Yorkshire has been made in establishing smoke control areas. Further vigorous action is necessary in some parts of the West Riding, particularly in the Yorkshire Coalfield.

470. The countryside and the National Parks provide the region with an environmental asset of great value. The best use should be made of it, particularly by giving close attention to the adequacy of the facilities providing access from the towns. Country Parks should also be developed to supplement the National Parks.

471. The region's coast line also represents an asset, the value of which is lessened unless adequate facilities are available to enable people from the towns of the region to go to and from it freely.

472. Special care must be exercised in planning development, particularly on Humberside, to

take account of high quality agricultural land and to maintain a balance between commercial and industrial development on the one hand, and the provision of adequate facilities for public recreation and enjoyment on the other.

Social Environment: Chapter 11

473. The region's educational services, which are vital to its future, present some disturbing features. The standard of school buildings in the region and the teacher to pupil ratio are among the lowest in the country. The number of pupils remaining at school beyond the statutory leaving age is also substantially below the national average, as are the GCE attainments of pupils leaving school in the East and West Ridings. There are also wide variations between sub-divisions. Grammar schools in the Coalfield received more children with an IQ of over 130 than in other parts of the West Riding, but sent fewer on to the universities. This seems to be principally a reflection of social conditions and parental attitudes.

474. The region, in common with other industrial regions in the north, has a health record below the national average, although there are wide variations between the records of different localities, suggesting that it is basically a healthy place in which to live. The loss of manpower through sickness absences in 1963-64 was equivalent to the absence of 3.5 per cent of the male labour force throughout the year. The loss rate through bronchial infections was exceptionally high. This heavy loss is partly due to the emphasis on mining and heavy industry in the region's industrial structure. The poor housing and general environmental conditions, including atmospheric pollution, in many parts of the region must, however, also be contributing factors.

475. The region's health services have fewer doctors and dentists in relation to the population than health services in the south. The main problem of the hospital services in the Leeds Hospital Region is the obsolescence of much of the accommodation and its uneven spread. Most of the hospitals in the Sheffield Hospital Region are old and need to be replaced or modernised, and there is a shortage of maternity beds. The hospital building programme announced in 1966 is designed to remedy these shortcomings.

476. A programme of improvements in the health and welfare services has been announced (Cmnd. 3022). This will, however, still leave deficiencies in some parts of the region, especially in the facilities for the mentally ill. The Council considers that more financial assistance from central government will be

necessary if required standards are to be reached. There is also the need to exploit to the full the potential resources of voluntary assistance to reinforce the efforts of local authorities.

477. The uneven distribution of facilities affects all parts of the health services: doctors and dentists in general practice; hospitals; and health and welfare facilities. The Coalfield and parts of South Yorkshire are worse off than other parts of the region. In these circumstances, close co-ordination of these services is especially important. The Council welcomes the Minister of Health's recent request for greater co-operation between the three branches of the National Health Service.

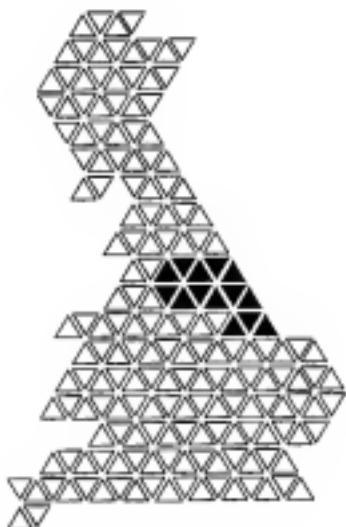
478. Facilities for the cultivation and appreciation of the arts are inevitably greater in London than in the rest of the country. Nevertheless, the level of activity in the region in relation to its size is generally low. To a great extent this is due to the small scale and fragmentary nature of what is done. The Council therefore welcomes the proposal of the Yorkshire Council of Social Service that there should be a Yorkshire Association of the Arts to act as a focus for and stimulus to, regional activity. More direct financial assistance will, however, be required, both from central and local government and from private patrons, especially industry, since greater activity in the arts will make its own contribution to increasing the economic and social efforts of the region.

Conclusion

479. The results of the Council's first survey of the region leave no doubt that much needs to be done and can be done if the social and economic resources of the region are to be fully developed. The Council places special emphasis on the need for regenerating existing industry and broadening its industrial structure in order to increase the region's, and the country's, economic resources. In this way the means can be provided for carrying out the large programme of improvement which is necessary in communications, housing, environment and social services in the region.

480. The region is large and the survey has shown that it is complex. The contributions from the several parts of the region will vary, and their needs and their problems will differ. The aim must be to stimulate collective regional action and a new sense of coherence. The Council is confident that this first report will provide a useful basis for consultation and discussion, and assist in developing a fuller understanding of the effort which is called for from the region.

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Statistical Appendix

A NOTE

1. This Appendix brings together some of the detailed material which forms the background to the review. The first section contains the definitions of the economic planning regions of the country and of the sub-divisions of the Yorkshire and Humberside Economic Planning Region used in this review; the second relates to the population chapter (Chapter 2); the third to the chapters on industry (Chapters 3 to 7); the fourth to housing (Chapter 9); and the fifth to social data (Chapter 11).

Definition of Areas

2. Appendix A1 gives the composition of the economic planning regions of Great Britain and the estimated civilian populations in 1965 (see Figure 1).

3. Appendix A2 gives the composition of the sub-divisions of the Yorkshire and Humberside Region used in the review and the estimated civilian population of each in 1966 (see Figure 4).

Population Statistics

4. The chief source of population statistics is the census, which has been held every ten years (with the exception of 1941) since 1801. The first quinquennial 10 per cent census was taken in April 1966. The Registrar General's published estimates of home population, based on the census, include, however, members of the Commonwealth and foreign forces in the area, and it is more appropriate for economic planning purposes to use the specially prepared mid-year estimates of civilian population.

5. Appendix A3 shows the distribution of population in 1961 and 1966 and the changes occurring between those dates, principally by natural change and migration, for the economic planning regions of Great Britain. Appendices A4 to 7 inclusive deal respectively with the periods 1861-68, 1958-61, 1961-62 and 1962-66. The changes by migration over these four periods are expressed in terms of mean annual rates in Appendix A13 (see Figures 6, 7 and 8).

6. A parallel sequence of population statistics for the sub-divisions of the Yorkshire and

Humberside Economic Planning Region (for the same periods) is given in Appendices A8 to 13 inclusive (see Figures 9, 10 and 11).

7. As the estimates used are for civilian population only, allowance has had to be made for reduction in the size of the armed forces over the period. In the absence of information on the destinations of demobilised personnel, the net gain to the civilian population of the country as a whole from this source has been allocated, for the purposes of this review, to areas *pro rata* to their populations. The estimates of net migration have been calculated by deducting from the total population change the estimates of natural change and the allowances made for gains from the armed forces.

8. Appendix A14 shows the growth of the population of the Yorkshire and Humberside Region since 1801, and how the area's share of the total population of Great Britain has varied (see Figure 5).

9. Appendix A15 gives estimated population changes for the sub-divisions of the Yorkshire and Humberside Economic Planning Region over the period 1964-81, by natural increase and migration.

Employment and Industry Statistics

10. The employment statistics used in this review relate to Ministry of Labour regions as constituted in June 1968. These regions are broadly the same as the economic planning regions. Minor variations occur because Ministry of Labour regions are made up of employment exchange areas whose boundaries do not usually correspond exactly with those of local authority areas. In Yorkshire and Humberside the main variations from the economic planning region are as follows:

- a the exclusion from the Ministry of Labour region and from the employment statistics of parts of Bowland and Sedbergh Rural Districts and Seddlerworth Urban District in West Riding; parts of Norton Urban District and Norton Rural District in the East Riding; and parts of Market Rasen Urban District and parts of Caistor, Welton, Hemingstone and Spilsby Rural Districts in Lindsey; and
- b the inclusion in the Ministry of Labour region and the employment statistics of Rixton Rural District and small parts of Wath and Thirsk Rural Districts in the North Riding; small parts of Belperwell and Chapel-en-le-Frith Rural Districts in Derbyshire and parts of East Retford and Worksop Rural Districts in Nottinghamshire.

The population and employment statistics are therefore not exactly comparable.

11. Employment statistics are based on the estimated number of employees in employment, which is derived from samples of national insurance cards exchanged, supplemented by employers' returns. They are therefore subject to sampling errors which can be substantial. In Industrial Orders, where numbers are small, the errors can be proportionately high. Part-time and occasional workers, as well as school-children and students who have jobs, are included as whole units. For Great Britain as a whole these estimates account for 90 per cent of the total working population (i.e. people of working age who either work for pay or gain or who register themselves as unemployed). The balance is made up of employees, persons working on their own account, members of Her Majesty's Forces and Women's Services and the unemployed.

12. In Appendices A16-18 the total number of employed is analysed by the twenty-four Industrial Orders defined in the Standard Industrial Classification issued by the Central Statistical Office in 1958. This classification is based on industries and not on occupations, and administrative, technical, clerical and ancillary staff are included in the figures of employment for the industry concerned. The Ministry of Labour's data for the years prior to 1958 are based on the 1948 version of the Standard Industrial Classification. For the purposes of the review, the Ministry of Labour has adjusted this as far as possible to produce estimates for 1953 which are reasonably comparable with those available for 1959 and later years.

13. Changes in the areas covered by Ministry of Labour regions have added to the difficulties of compiling satisfactory employment statistics. Yorkshire and Humberside has only existed as a Ministry of Labour region since April 1965. From April 1962 to April 1965, the roughly comparable region was Yorkshire and Lincolnshire, prior to which the region was East and West Ridings. Adjustments have been made to obtain regional estimates prior to 1965, which are therefore not as reliable as the 1965 figures.

14. The regional estimates do not take full account of cases where a person is employed in a different region from that in which his national insurance card is exchanged. Before 1965 no adjustments at all were made to regional estimates on this account, but since that date allowance has been made for the greater proportion of these cases, and in order to provide reasonably comparable figures for years before 1965, approximate retrospective adjustments have been made to the figures.

15. The percentage changes which occurred over the periods 1953-59, 1959-63 and to 1963-65 in the numbers employed by Industrial Orders in the Yorkshire and Humberside Region and in Great Britain, are given in Appendix A16. Similar estimates are given for males in Appendix A17 and for females in Appendix A18. Although these percentage changes can only indicate the order of magnitude of the change in a broad way, they are given to one decimal place for purposes of uniform presentation. The change in employment between 1953 and 1965 is not shown because the figures are not strictly comparable and because the years are not in the same stage of the economic cycle; the percentage changes for 1953-63 are quoted for purposes of comparison between Yorkshire and Humberside and Great Britain, rather than for comparison with earlier years.

16. The 'activity rate', i.e. the total number of employees (employed and unemployed) expressed as a percentage of the home population of 15 years and over, is given in respect of males and females in East and West Ridings and Great Britain for the years 1959, 1963 and 1964 in Appendix A20. Later figures are not yet available. Figures for Yorkshire and Humberside are available only for the years 1959 and 1963 and these are rough estimates not calculated on the same basis as for Great Britain and East and West Ridings and therefore less reliable.

17. Appendix A21 provides estimates of the movement of male, female and total employees into and out of the East and West Ridings for the period 1954-64. Appendix A22 analyses the estimated movement of employees between East and West Ridings and other Ministry of Labour regions, and Appendix A23 estimates the total inward and outward movements for each of the Ministry of Labour regions. The estimates in these three Appendices are based on a 1 per cent sample of National Insurance records and are therefore subject to appreciable margins of error, particularly when a net change is calculated from inward and outward figures and when they are broken down into movements between one region and another. Moreover, for a number of reasons the movement of cards is an imperfect reflection of migration. The figures do not include civil servants who do not hold national insurance cards. They also exclude movements of workpeople who enter employment for the first time in a particular year and have no earlier card to exchange, e.g. new Commonwealth immigrants and school-leavers. The movement recorded statistically may, in some cases, have involved no more than a change of employment from a firm on one side of the regional boundary to one on the other side, or the removal of a

firm to new premises just across the regional boundary without any change of residence of workpeople being involved.

18. Appendix A24 provides regional comparisons relating to net output per person employed in manufacturing industries. The figures are based on the censuses of production for 1948 and 1958. The 'regions' in this table are the standard regions used for statistical purposes before they were changed in 1965. Appendix A25, which is based on an analysis of industrial development certificate records for Great Britain, provides regional comparisons of building completions, and buildings approved, in recent years.

19. For review purposes the Ministry of Labour has prepared, in respect of three even sub-divisions of the region, estimates of the broad industrial distribution of employment in 1965 and of changes in employment between 1953 and 1965. These are shown in Appendices A26-28. The sub-divisions are aggregations of Ministry of Labour employment exchange areas and do not coincide precisely with the sub-divisions of the Yorkshire and Humberside Economic Planning Region as defined by local authority areas in Appendix A2. As far as possible these employment estimates have been brought into line with regional and national estimates. Statistics of employees in employment for the sub-divisions are not available for the period prior to 1959 and the figures for the period 1953-59 are therefore based on estimated total employees (employed and unemployed). For other technical reasons, figures for 1963-65 are not strictly comparable with earlier periods, nor are they in the same stage of the economic cycle. They should therefore be compared with the earlier periods only in a very general way. Statistics for some sub-divisions relate to relatively small numbers and in these cases the possibilities of sampling and estimation errors are increased.

20. Employee activity rates for the sub-divisions are not available on the same basis as for Yorkshire and Humberside and Great Britain. In order to give some general indication of the relative availability of employment for females, a comparison of the percentage of females in the total employee population in each sub-division is included in Appendix A26. It is important to recognise that these figures do not directly reflect the extent of female labour reserves and, like activity rate figures, are also influenced by demographic, social and educational factors. In attempting to assess female labour reserves, therefore, little significance can be attached to small differences of, say, 1 or 2 per cent between sub-divisions, but a difference of, say, 8-10 per cent is more meaningful.

Housing Statistics

21. Appendix A29 gives the number of houses completed annually since 1950 in the sub-divisions of the region and shows the breakdown into totals completed by local authorities and housing associations on the one hand and private builders on the other.

22. Appendix A30 shows one statutory and five arbitrary estimates of the number of unfit dwellings in the sub-divisions of the Yorkshire and Humberside Economic Planning Region, and shows their respective proportions of the existing stock of dwellings.

23. Appendix A31 sets out the various items making up the different estimates of housing requirements in the region between 1965 and 1981, on the basis of retention of all natural increase, or on the assumption that past migration trends will continue until 1981. These estimates, in effect, are indicators of what needs to be done, and are not the product of an actual clearance programme.

Social Statistics

24. Appendix A32 gives an indication of the GCE attainments and destinations of school leavers in 1963-64 in Department of Education and Science regions. The data are derived from *Statistics of Education 1964*.

25. Appendix A33 gives details of school leavers, teacher/pupil ratios and the standard of school buildings. The data refer to standard regions and are taken from the *School Building Survey 1962* (Department of Education and Science) and the *Statistics of Education 1963 and 1964* (Department of Education and Science).

26. Appendix A34 gives birth and death rates, standardised for age structure, for the sub-divisions of the region, together with infant mortality data and compares all these with the England and Wales figures. The source of this table is the *Registrar General's Annual Review 1960-64*.

NOTE

Figures have been rounded to the nearest final digits and in some tables there may be a discrepancy between the sum of the constituent items and the total as shown.

Economic Planning Regions of Great Britain

Composition of Economic Planning Regions	1985 Civilian Population '000	Composition of Economic Planning Regions	1985 Civilian Population '000
Great Britain	52,691	Lincolnshire, Parts of Kesteven and Lincoln CB	218
Scotland	6,178	Northumbria	422
Northern Region	3,297	Nottinghamshire	942
Cumbria	296	Rutland	25
Durham	1,856		
Northumberland	827		
Westmorland	67		
Yorkshire, North Riding	572		
Yorkshire and Humberside Region	4,700	West Midland Region	4,983
Lincolnshire: Parts of Lindsey excluding Lincoln CB	443	Herefordshire	137
Yorkshire, East Riding	538	Shropshire	312
Yorkshire, West Riding	3,717	Staffordshire	1,634
North West Region	8,701	Warwickshire	2,076
Cheshire	1,452	Worcestershire	605
*Derbyshire (part)	71		
Lancashire	8,178		
Wales and Monmouthshire	2,603	South West Region	3,626
Anglesey	58	Cornwall	344
Breconshire	54	Devon	641
Cardiganshire	120	Gwent	325
Carmarthenshire	53	Gloucestershire	1,081
Ceredigionshire	166	Somerset	627
Denbighshire	178	Wiltshire	480
Flintshire	157		
Glamorgan	1,247		
Merionethshire	38	East Anglia Region	1,832
Monmouthshire	460	Cambridgeshire and Isle of Ely	269
Montgomeryshire	45	Huntingdon and Peterborough	173
Pembrokeshire	94	Norfolk	574
Radnorshire	18	Suffolk, East	388
		Suffolk, West	137
East Midland Region	3,259	South East Region	16,750
*Derbyshire (cont)	638	Bedfordshire	417
Leicestershire	711	Berkshire	594
Lincolnshire: Parts of Holland	105	Buckinghamshire	525
		Sussex	1,214
		Hampshire	1,612
		Herefordshire	699
		Kent	1,267
		Greater London	7,935
		Oxfordshire	334
		Surrey	982
		Sussex, East	702
		Sussex, West	443
		Isle of Wight	95

*The area of Derbyshire falling within the North-West Region comprises Buxton Mts, Glossop Mts, New Mills CB, Whaley Bridge CB and Chapel-en-le-Frith CB.

Yorkshire and Humberside Economic Planning Region

Constituent Areas	1965 Civilian Population '000	Constituent Areas	1965 Civilian Population '000
Yorkshire & Humberside	4,899.6	Spennborough MB	37.6
West Yorkshire	1,813.8	Stanley UD	18.6
Yorkshire, West Riding (Part)		Tedmorden MB	18.6
Birstall CB	286.0	Bowland RD	4.8
Dewsbury CB	83.3	Hepton RD	3.6
Hellifield CB	86.0	Sedburgh RD	3.6
Huddersfield CB	132.3	Seide RD	13.9
Leeds CB	859.3	Skipton RD	24.0
Wakefield CB	60.1	Wetherfield RD	22.0
Almondbrough UD	28.7	Wharfedale RD	7.2
Bentley UD	13.2		
Barnoldswick UD	10.0		
Bentley MB	40.6	South Yorkshire	721.6
Bingley UD	24.2	Yorkshire, West Riding (Part)	
Broughouse MB	32.2	Rotherham CB	88.6
Colne Valley UD	21.0	Sheffield CB	455.9
Darby Dale UD	9.7	Renishaw UD	13.6
Dentholme UD	2.6	Stockbridge UD	11.3
Edby UD	8.1	Rotherham RD	83.2
Elland UD	18.6	Worley RD	51.2
Hebden Royd UD	9.1		
Heddonswicks UD	6.8	Yorkshire Coalfield	787.0
Holmfirth UD	18.7	Yorkshire, West Riding (Part)	
Horsforth UD	8.9	Bentley CB	75.6
Ilkley UD	18.0	Dansforth CB	85.7
Kelshay MB	19.1	Adwick-le-Street UD	18.4
Kirkburton UD	18.7	Bentley-with-Arkesay UD	23.4
Meltham UD	8.7	Caselton MB	40.0
Miffield UD	14.1	Conisborough UD	17.6
Morley MB	43.0	Cudworth UD	9.1
Ossett MB	18.9	Derfield UD	6.9
Otley UD	11.8	Denton UD	15.0
Pudsey MB	37.3	Deeene UD	28.6
Greensbury and Shelf UD	8.6	Dodworth UD	4.1
Ripponden UD	8.0	Featherstone UD	15.0
Rothwell UD	28.6	Girfths UD	17.9
Saddellworth UD	16.1	Haworth UD	19.3
Shipley UD	29.6	Hoyland Nether UD	15.6
Sladen UD	5.6	Knottlingley UD	13.6
Skipton UD	13.1	Melby UD	14.4
Sowerby Bridge UD	16.9	Messborough UD	16.6
		Normanton UD	18.4

Constituent Areas	1965 Civilians Population '000	Constituent Areas	1965 Civilians Population '000
Penistone UD	7.3	Beverley MBS	18.7
Pontefract MBS	28.6	Haltemprice UD	48.9
Rawdon UD	8.6	Hedon MBS	2.6
Swinton UD	16.2	Hornsea UD	8.1
Tiskhill UD	2.6	Withernsea UD	5.0
Wetherby Deane UD	15.3	Beverley RD	28.6
Wimbleball UD	18.1	Holderness RD	22.7
Wombwell UD	16.2	Howden RD	12.3
Worsbrough UD	7.4		
Doncaster RD	53.6	Yorkshire, West Riding (Part)	
Haworth RD	22.1	Grosmere MBS	18.7
Kirkbymoorside RD	8.9	Grosmere RD	8.9
Penistone RD	7.4		
Thorne RD	38.6	South Humberside	
	387.1	Lincolnshire, Parts of Lindsey	
Mid-Yorkshire		Grimby CS	35.1
Yorkshire, West Riding (Part)		Barton-upon-Humber UD	8.3
York CB	105.6	Briigg UD	5.1
Hernside MBS	68.4	Cleethorpes MBS	33.8
Knaresborough UD	10.2	Scunthorpe MBS	70.2
Ripon MBS	11.0	Claiton RD	13.5
Selby UD	10.7	Glenford Bridge RD	37.4
Nidderdale RD	16.7	Grimby RD	22.6
Ripon and Pickering Bridge RD	11.8	Isle of Axholme RD	14.4
Selby RD	7.1		
Tadcaster RD	29.7	South Lindsey	
Wharfedale RD	28.8	Lincolnshire, Parts of Lindsey	
Yorkshire, East Riding (Part)		Alford UD	2.9
Bridlington MBS	28.9	Briggsborough UD	17.3
Diffield UD	6.9	Horncastle UD	3.8
Holme UD	4.0	Louth MBS	11.4
Marston UD	5.0	Market Rasen UD	5.5
Bridlington RD	8.7	Scunthorpe and Sutton UD	2.4
Derwent RD	16.6	Market Rasen UD	12.7
Diffield RD	10.4	Shepshed UD	2.3
Marston RD	7.0	Woodhall Spa UD	12.9
Pocklington RD	14.0	Gainsborough RD	13.0
	467.7	Hornsea RD	18.2
North Humberside		Louth RD	22.8
Yorkshire, East Riding (Part)		Spilsby RD	19.6
Kingston upon Hull CB	298.8	Withernsea RD	

Civilian Population Changes: Great Britain, 1951-65

Area	1951		Changes 1951-65				1965	
	Distribution		Total		By Births and Deaths		Estimated Net Balance by Migration	
	'000	%	'000	%	'000	%	'000	%
Great Britain...	48,333.3	100.0	4,387.6	9.0	3,677.9	7.6	481.1	1.0
Scotland...	5,084.3	10.5	113.2	2.2	458.6	3.0	42.0	-0.5
Northern Region	3,026.0	6.4	202.2	6.5	279.6	2.0	25.1	-0.5
Yorkshire and Humberside Region	4,689.1	9.2	249.6	5.4	366.6	6.9	37.6	-0.8
North West Region	8,379.6	13.2	320.9	5.0	351.1	6.1	53.6	-1.0
Wales and Monmouthshire	2,569.0	5.3	114.1	4.4	132.0	5.1	21.5	-0.4
East Midland Region	2,691.6	8.0	367.7	12.7	255.3	6.6	24.6	8.7
West Midland Region	4,263.3	9.1	520.1	13.2	440.6	10.1	37.6	1.0
East Anglia Region	1,347.6	2.8	184.2	13.7	59.2	7.4	11.5	1.9
South West Region	3,228.8	8.7	389.4	12.4	178.4	6.4	27.6	0.1
South East Region	14,914.7	30.3	1,026.1	12.3	1,301.0	7.4	127.9	0.9

Civilian Population Changes: Great Britain, 1951-56

Area	1951		1956		Changes 1951-56		1955	
	Distribution		Total		Estimated Gain from Armed Forces		Estimated Net Migration by Migration	
	1955	%	'000	%	'000	%	'000	%
Great Britain...	48,353.3	100.0	501.0	1.0	1,013.4	2.1	76.3	-0.4
Scotland...	5,084.3	10.5	18.0	0.4	153.2	3.0	6.8	-2.6
Northern Region	2,075.0	4.1	47.4	1.5	62.6	2.8	4.9	-47.4
Yorkshire and Humberside Region	4,489.1	8.2	48.8	1.0	85.0	1.8	7.1	-48.6
North West Region	3,735.9	7.2	61.0	1.0	101.7	1.6	10.2	-60.3
Wales and Monmouthshire	2,585.0	5.1	18.8	0.7	39.7	1.6	4.1	-26.0
East Midland Region...	2,391.8	4.6	80.2	3.0	71.4	2.6	4.6	12.2
West Midland Region	4,393.3	8.1	125.2	2.6	121.6	2.6	7.0	-3.3
East Anglia Region	1,947.4	3.8	39.6	2.0	39.3	2.1	2.1	0.6
South West Region	3,226.3	6.7	63.0	2.0	60.0	1.4	5.2	11.6
South East Region	14,394.7	20.8	411.4	2.8	278.8	1.9	23.8	110.3

Civilian Population Changes: Great Britain, 1956-61

Area	1956		1961		Changes 1956-61		Estimated Net Balance by Migration	Distribution			
	Distribution		Total		By Births and Deaths						
	1956 '000	%	1956 '000	%	1956 '000	%					
Great Britain ..	46,234.3	100.0	47,812.2	97.7	1,580.2	2.6	281.7	230.2	0.8	51,046.4	100.0
Scotland ..	5,029.3	10.5	72.1	1.4	125.3	3.6	20.7	-141.9	-2.0	5,155.4	10.1
Northern Region ..	3,142.4	6.4	82.1	2.0	103.7	3.0	18.0	-20.6	-0.9	3,234.5	6.3
Yorkshire and Humberside Region ..	4,584.7	9.1	76.8	1.7	107.4	2.4	25.8	-87.5	-1.3	4,580.4	9.0
North West Region ..	8,431.4	15.1	110.0	1.7	123.7	2.1	26.9	-60.6	-0.9	6,541.4	12.6
Wales and Monmouthshire ..	2,557.6	5.3	37.7	1.5	44.6	1.7	14.6	-21.7	-0.8	2,635.5	5.1
East Midland Region ..	2,980.0	6.0	141.8	4.7	183.3	3.0	17.1	88.1	1.2	3,120.5	6.1
West Midland Region ..	4,586.2	9.2	234.8	5.2	186.6	3.4	26.6	54.4	1.2	4,743.0	9.3
East Anglia Region ..	1,378.4	2.8	71.9	5.2	38.4	2.6	7.4	27.6	2.0	1,455.3	2.6
South West Region ..	3,261.6	6.7	189.5	5.2	201.1	1.6	19.0	99.5	2.6	3,461.3	6.6
South East Region ..	16,326.1	31.1	826.7	5.3	105.3	2.6	87.9	332.6	2.2	15,132.0	31.6

APPENDIX

A6

Civilian Population Changes: Great Britain, 1961-62

Area	Distribution	1961				1962			
		Total		By Deaths and Births		Estimated Gain from Armed Forces		Estimated Net Balance by Migration	
		'000	%	'000	%	'000	%	'000	%
Great Britain	-	51,045.5	100.0	540.9	1.1	212.2	0.8	31.0	0.2
Scotland	-	5,155.4	10.1	12.7	0.2	29.1	0.8	-29.5	-0.5
Northern Region	-	3,234.5	6.3	30.4	0.9	22.1	0.7	6.4	0.2
Yorkshire and Humberside Region	-	4,380.4	8.0	40.7	0.8	26.6	0.6	2.8	0.3
North West Region	-	6,541.4	12.0	55.6	0.8	33.8	0.5	4.0	0.1
Wales and Monmouthshire	-	2,625.6	5.1	20.1	0.8	10.8	0.4	1.8	0.3
East Midland Region	-	3,121.6	6.1	40.1	1.0	22.0	0.7	1.9	0.1
West Midland Region	-	4,743.3	9.3	67.7	1.4	32.1	0.6	2.9	0.1
East Anglia Region	-	1,450.3	2.8	25.8	1.4	8.2	0.6	0.9	0.1
South West Region	-	3,461.3	6.3	45.8	1.3	15.0	0.4	2.1	0.1
South East Region	-	16,192.8	31.4	216.3	1.3	97.5	0.6	9.8	0.6
								16,339.1	31.7

Civilian Population Changes: Great Britain, 1962-65

Area	1962		Changes 1962-65				1965	
	Distribution		Total	By Births and Deaths	Estimated Gain from Armed Forces	Estimated Net Balance by Migration	Distribution	
	'000	%					'000	%
Great Britain	109.0	100.0	1,104.4	2.1	1,082.1	2.6	24.0	2.1
Scotland	5,568.1	10.0	8.4	0.2	120.8	2.3	5.9	-11.4
Northern Region	3,264.9	6.3	32.3	1.0	64.0	2.0	1.3	-33.0
Yorkshire and Humberside Region	4,821.1	8.0	78.6	1.7	87.8	1.9	1.4	-11.1
North West Region	6,867.0	12.8	108.7	1.6	122.0	1.6	2.6	-26.8
Wales and Monmouthshire	2,865.6	5.1	37.6	1.4	38.9	1.4	1.0	-0.4
East Midland Region	3,161.7	5.1	97.0	3.1	73.6	2.3	1.2	23.0
West Midland Region	4,811.0	8.3	152.4	3.2	126.8	2.6	1.9	23.7
East Anglia Region	1,471.1	2.9	89.8	4.1	28.4	1.0	0.8	33.6
South West Region	3,926.9	6.8	121.3	3.6	83.4	1.6	1.3	66.6
South East Region	16,339.1	31.7	410.7	2.6	340.4	2.1	5.4	62.7

APPENDIX

A8

Civilian Population Changes: Yorkshire and Humberside, 1951-65

Area	Distribution	1951				Changes 1951-65				1965			
		'000	%	'000	%	'000	%	'000	%	'000	%	'000	%
Yorkshire and Humberside	...	4,469.1	100.0	2,629.9	5.4	2,025.8	4.9	375	-2.3	4,239.6	100.0		
West Yorkshire	...	1,867.8	41.8	460.0	2.6	631	4.4	154	-2.6	1,913.5	47.7		
South Yorkshire	...	712.7	16.0	74	1.1	45.0	6.3	5.6	-6.0	721.5	16.3		
Yorkshire Coastfield	...	851.3	15.5	787	11.0	814	11.6	5.6	-11.6	787.0	16.3		
Mid-Yorkshire	...	363.4	7.9	337	9.5	147	4.2	3.1	16.6	457.1	6.2		
North Humberside	...	439.0	9.9	297	6.6	42.7	9.7	3.6	-17.6	-4.1	467.7	10.0	
South Humberside	...	280.6	5.6	381	14.6	201	11.6	2.2	6.6	219.6	6.4		
South Lindsey	...	123.6	2.7	30	10.6	7.0	6.6	1.1	0.6	0.4	144.1	3.1	

Civilian Population Changes: Yorkshire and Humberside, 1951-56

Area	Destination	Changes 1951-56				1956	
		1951		1956		Estimated Net Balance by Migration	Population
		'000	%	'000	%		
Yorkshire and Humberside	..	4,459.1	100.0	455.8	1.0	-35.6	4,504.7
West Yorkshire	..	1,867.6	41.9	-0.7	-0.03	17.2	1,869.9
South Yorkshire	..	715.7	16.0	-1.6	-0.3	11.6	711.9
Yorkshire Gt. Britain	..	691.0	15.6	21.2	3.1	26.3	712.6
Mid-Yorkshire	..	363.4	7.8	3.1	0.0	4.0	361.6
North Humberside	..	439.0	9.9	7.8	1.6	14.1	445.6
South Humberside	..	260.6	5.6	8.5	3.3	9.0	269.0
Bothth Lindsey	..	133.4	3.0	2.5	1.9	2.1	135.1

APPENDIX

A10**Civilian Population Changes:
Yorkshire and Humberside, 1956-61**

Area	1956			Changes 1956-61			1961				
	Distribution		Total	By Births and Deaths		Estimated Gain from Armed Forces	Estimated Net Return by Migration		Distribution		
	1956	%	1956	%	1956	%	1956	%	1956	%	
Yorkshire and Humberside	4,854,7	100.0	76.7	4.7	197.4	2.4	28.4	-87.6	-5.3	4,869.4	100.0
West Yorkshire	1,886.9	41.4	17.4	0.9	26.8	1.5	10.7	-22.2	-1.2	1,884.3	41.1
South Yorkshire	711.9	15.6	2.9	0.4	14.3	2.0	4.1	-17.6	-2.6	714.6	15.8
Yorkshire Coastland	712.5	15.8	21.3	2.6	26.3	4.1	4.0	-13.0	-1.4	723.6	15.0
Mid-Yorkshire	381.5	8.0	6.8	1.4	4.9	1.4	2.1	-0.6	-0.1	381.0	8.0
North Humberside	446.0	9.3	9.4	2.1	14.6	3.0	2.8	-7.8	-1.7	446.2	10.0
South Humberside	289.0	6.0	17.3	6.4	10.4	3.8	1.6	6.4	2.0	289.3	6.3
346th Unitary	136.1	3.0	0.6	0.6	3.0	2.2	0.6	-3.0	-2.2	136.6	3.0

A11

Civilian Population Changes: Yorkshire and Humberside, 1961-62

Area	1961		Changes 1961-62		1962	
	Distribution		6y Births and Deaths		Estimated Net Balance by Migration	
	'000	%	'000	%	'000	%
Yorkshire and Humberside	4,880.4	100.0	40.7	0.8	25.6	0.5
West Yorkshire	1,894.3	41.1	14.7	0.8	7.7	0.4
South Yorkshire	1,714.6	35.6	4.1	0.6	4.1	0.4
Yorkshire Coastland	735.8	16.0	7.7	1.0	6.0	0.8
Mid-Yorkshire	262.0	5.6	4.6	1.3	1.3	0.4
North Humberside	456.2	10.0	3.6	0.8	3.3	0.7
South Humberside	208.3	4.3	4.2	1.6	2.5	0.9
South Lindsey	136.9	3.0	1.6	1.3	0.6	0.4

APPENDIX

A12

Civilian Population Changes:
Yorkshire and Humberside, 1962-65

Area	1962			Changes 1962-65			1965		
	Distributions		Total	By Births and Deaths		Estimated Gain from Abroad/Forces	Estimated Net Balance by Migration		Distributions
	'000	%	'000	%	'000	%	'000	%	'000
Yorkshire and Humberside	4,827.1	100.0	78.6	1.7	87.8	1.0	1.8	-11.4	-0.2
West Yorkshire	1,869.0	41.1	14.6	0.8	29.2	1.6	0.7	-18.3	-0.3
South Yorkshire	718.4	15.6	2.6	0.4	13.0	1.6	0.8	-10.7	-1.6
Yorkshire Coastfield	741.5	16.0	29.6	3.4	19.9	2.7	0.8	6.3	0.7
West Yorkshire	372.4	8.1	14.5	3.9	4.4	1.2	0.2	9.9	2.7
North Humberside	450.1	10.0	7.6	1.7	10.4	2.3	0.2	-3.2	-0.7
South Humberside	230.8	5.0	9.1	2.4	8.2	2.6	0.1	-8.2	-0.1
South Lindsey	135.7	3.0	9.4	2.3	2.3	1.7	—	3.1	2.2

A13

Civilian Population: Mean Annual Changes by Migration: Great Britain and Yorkshire and Humberside, 1951-56, 1956-61, 1961-62, 1962-65

Area	1951-56		1956-61		1961-62		1962-65	
	'000	%	'000	%	'000	%	'000	%
Great Britain	-37.9	-8.58	48.0	8.1	138.8	8.2	94	8.03
Scotland	-27.9	-8.6	-28.4	-0.7	-28.5	-0.5	-33.1	-0.3
Northern Region	-9.5	-0.3	-5.9	-0.1	8.4	0.2	-11.0	-0.3
Yorkshire and Humberside Region	-5.3	-8.2	-11.6	-6.3	12.3	0.3	-3.7	-8.07
West Yorkshire	-4.2	-0.2	-4.4	-0.2	5.8	0.3	-5.1	-0.3
South Yorkshire	-2.9	-0.4	-3.5	-0.6	-0.4	-0.1	-3.0	-0.5
Yorkshire Coastfield	-1.2	-0.2	-2.6	-0.3	1.3	0.2	1.6	0.2
Mid-Yorkshire	0.7	0.2	-0.1	-0.02	3.1	0.6	3.3	0.9
North Humberside	-1.4	-0.3	-1.6	-0.3	0.3	0.1	-1.1	-0.2
South Humberside	-0.2	-0.08	1.1	0.4	1.4	0.6	-0.1	-0.02
South Lindsey	-0.1	-0.08	-0.3	-0.4	1.1	0.8	1.0	0.7
North West Region	-12.1	-0.2	-12.1	-0.1	17.8	0.3	-8.9	-0.1
Wales and Monmouthshire	-5.0	-0.2	-4.3	-0.2	7.7	0.3	-0.1	-
East Midland Region	2.4	0.08	7.2	0.2	16.2	0.6	7.7	0.2
West Midland Region	-0.7	-0.02	10.3	0.2	28.7	0.6	7.9	0.2
East Anglia Region	0.1	-	5.5	0.4	11.7	0.6	11.3	0.8
South West Region	2.4	0.08	18.1	0.5	28.5	0.6	22.2	0.8
South East Region	22.2	0.1	89.5	0.4	93.0	0.6	21.3	0.1

A14

The Proportion of the Population of Great Britain in the Yorkshire and Humberside Region, 1801-1965

Year	Enumerated			Census	
			Percentage of the Population of Great Britain		
	'000	3		'000	5
1	2	3	4	5	
1801	819	7.7	—	—	—
1811	949	7.9	—	—	—
1821	1,134	8.0	—	—	—
1831	1,343	8.3	—	—	—
1841	1,575	8.6	—	—	—
1851	1,793	8.6	—	—	—
1861	2,054	8.7	—	—	—
1871	2,374	9.1	—	—	—
1881	2,793	9.4	—	—	—
1891	3,103	9.4	—	—	—
	3,117	9.5	—	—	—
1901	3,500	9.5	—	—	—
1911	3,877	9.5	—	—	—
1921	4,074	9.5	—	—	—
1931	4,285	9.5	—	—	—
1941	No Census	—	—	—	—
1951	4,501	9.2	4,455	9.2	—
1961	4,603	9.0	4,583	9.0	—
1965	—	—	4,700	9.0	—

NOTES
1. The figures given in Column 3 are the census enumerated populations. In Column 4 the Registrar General's mid-year estimates for 1891, 1881 and 1882 are given for comparison; equivalent estimates are not available for earlier years.

2. The figures for years prior to 1861 are for aggregates of Ancient Counties; subsequent ones relate to areas as constituted in 1886. Imaging figures are given for 1881.

Estimated Civilian Population Changes: Yorkshire and Humberside, 1964-81

Area	Distribution	1964		1964-81		1981		1984-85		1985	
		National Increase		Distribution with No Allowance for Migration after 1984		Migration		Total Change		Dimension	
		'000	%	'000	%	'000	%	'000	%	'000	%
Yorkshire and Humberside	...	4,931.4	100.0	560.4	13.9	5,322.4	100.0	-125.3	-2.9	5,193.1	100.0
West Yorkshire	...	1,936.0	40.6	222.3	11.7	2,130.3	60.0	-69.3	-3.5	2,050.4	39.8
South Yorkshire	...	721.9	15.5	94.0	13.0	815.9	15.9	-121.9	-14.8	844.1	13.4
Yorkshire Coastland	...	755.8	16.2	145.8	19.2	920.9	17.0	3.4	0.5	942.2	19.7
Mid Yorkshire	...	381.0	8.2	50.7	8.1	411.7	7.7	42.3	11.5	414.4	8.6
North Humberside	...	484.6	10.5	77.1	16.6	541.9	10.2	-21.6	-4.8	560.6	12.0
South Humberside	...	286.7	6.3	60.9	20.6	350.6	8.7	20.3	5.9	370.9	7.9
South Lindsey	...	142.1	3.0	20.0	14.1	162.1	3.0	4.6	2.6	168.7	3.3

Total Employment Changes by Industrial Orders: Yorkshire and Humberside and Great Britain, 1953-59, 1959-63, 1963-65

Industrial Order	Percentage					
	Changes in Estimated Numbers of Employees (total—male and female) in Employment					
	1953-59 (six years)		1959-63 (four years)		1963-65 (two years)	
	Yorks. and Humberside	Great Britain	Yorks. and Humberside	Great Britain	Yorks. and Humberside	Great Britain
Agriculture, Forestry, Fishing	-10.4	-12.8	-12.9	-13.6	-11.0	-12.2
Mining and Quarrying	-6.7	-5.5	-12.7	-17.6	-4.4	-8.5
TOTAL—PRIMARY INDUSTRIES	-8.8	-5.9	-12.7	-16.0	-8.1	-10.2
Food, Drink and Tobacco	+5.8	+5.5	+5.2	+8.1	-0.9	+0.8
Chemicals and Allied Industries	+5.2	+10.7	+1.4	-0.6	+1.6	+0.7
Metal Manufacture	+0.4	+1.1	+2.8	+3.2	+5.6	+5.8
Engineering, Elec. and Metal Goods	+8.0	+11.3	+5.9	+10.8	+4.1	+6.5
Shipbuilding and Marine Engineering	-10.6	-8.0	-11.4	-20.7	+1.3	-3.2
Vehicles	+9.6	+10.4	+8.8	+0.7	-1.0	-0.5
Textiles	-7.2	-12.5	-3.7	-7.5	-5.0	-1.2
Leather, Leather Goods and Fur	-16.8	-11.8	—	-1.9	—	-1.9
Clothing and Footwear	-6.2	-7.7	-4.2	-0.6	-1.4	-2.1
Bricks, Pottery, Glass, Cement etc.	+7.6	-2.7	+5.7	+6.3	+8.1	+5.1
Timber, Furniture, etc.	-1.3	-1.1	+3.0	+0.6	+11.3	+5.6
Paper, Printing and Publishing	+13.7	+16.0	+13.0	+8.1	-6.8	+2.0
Other Manufacturing Industries	+26.0	+12.7	+15.8	+10.4	+3.7	+9.3
TOTAL—MANUFACTURING INDUSTRIES	+1.6	+4.2	+2.8	+3.3	+1.2	+3.1
TOTAL—CONSTRUCTION	+3.0	+4.6	+18.5	+11.7	+9.2	+7.5
Gas, Electricity and Water	+8.6	+0.6	+12.2	+8.1	-1.0	+3.4
Transport and Communication	-7.8	-3.0	-2.2	—	-7.8	-3.2
Distributive Trades	+15.1	+14.5	+8.1	+7.8	+0.3	+2.6
Insurance, Banking and Finance	+18.0	+18.9	+12.9	+14.2	+7.4	+5.6
Professional and Scientific Services	+16.5	+19.8	+15.4	+15.6	+10.1	+8.6
Miscellaneous Services	+4.5	-0.2	+10.0	+5.5	+9.6	+6.0
Public Administration	+6.2	-1.3	+4.7	+7.0	-7.6	-2.7
TOTAL SERVICE INDUSTRIES	+7.1	+5.7	+7.4	+7.6	+2.0	+2.9
GRAND TOTAL	+2.6	+4.3	+4.0	+4.7	+1.8	+2.4

Male Employment Changes by Industrial Orders: Yorkshire and Humberside and Great Britain, 1953-59, 1959-63, 1963-65

Industrial Order	Changes in Estimated Numbers of Male Employees in Employment						Percentage	
	1953-59 (six years)		1959-63 (four years)		1963-65 (two years)			
	Yorks. and Humberside	Great Britain	Yorks. and Humberside	Great Britain	Yorks. and Humberside	Great Britain		
Agriculture, Forestry, Fishing	- 93	- 136	- 166	- 166	- 110	- 127		
Mining and Quarrying	- 81	- 82	- 126	- 161	- 40	- 69		
TOTAL—PRIMARY INDUSTRIES	- 81	- 83	- 136	- 172	- 63	- 106		
Food, Drink and Tobacco	+ 43	+ 60	+ 37	+ 43	- 06	+ 11		
Chemicals and Allied Industries	+ 44	+ 124	+ 22	- 06	+ 16	+ 01		
Metal Manufacture	+ 02	+ 10	+ 67	+ 32	+ 68	+ 71		
Engineering, Elec. and Metal Goods	+ 70	+ 113	+ 60	+ 106	+ 26	+ 66		
Shipbuilding and Marine Engineering	- 206	- 62	- 107	- 212	+ 13	- 34		
Vehicles	+ 104	+ 112	+ 67	+ 66	- 24	- 06		
Textiles	- 21	- 76	+ 03	- 27	- 36	+ 02		
Leather, Leather Goods and Fib.	- 104	- 146	- 24	- 26	+ 26	- 23		
Clothing and Footwear	- 06	- 76	+ 06	- 16	- 06	- 26		
Bricks, Pottery, Glass, Cement, etc.	+ 74	- 14	+ 30	+ 67	+ 66	+ 56		
Timber, Furniture, etc.	- 17	- 26	+ 62	+ 17	+ 16	+ 82		
Paper, Printing and Publishing	+ 167	+ 172	+ 168	+ 107	- 13	+ 16		
Other Manufacturing Industries	+ 267	+ 179	+ 163	+ 114	+ 66	+ 80		
TOTAL—MANUFACTURING INDUSTRIES	+ 33	+ 62	+ 46	+ 41	+ 14	+ 32		
TOTAL—CONSTRUCTION	+ 14	+ 33	+ 106	+ 112	+ 31	+ 74		
Gas, Electricity and Water	+ 66	- 06	+ 103	+ 66	- 06	+ 26		
Transport and Communication	- 69	- 36	- 23	- 07	- 84	- 42		
Distributive Trades	+ 106	+ 107	+ 26	+ 61	- 06	- 01		
Insurance, Banking and Finance	+ 106	+ 137	+ 66	+ 83	+ 21	+ 43		
Professional and Scientific Services	+ 141	+ 173	+ 122	+ 166	+ 64	+ 83		
Miscellaneous Services	+ 86	+ 16	+ 164	+ 117	+ 73	+ 62		
Public Administration	- 04	- 33	+ 64	+ 61	- 83	- 36		
TOTAL—SERVICE INDUSTRIES	+ 22	+ 32	+ 40	+ 81	- 14	+ 07		
GRAND TOTAL	+ 13	+ 30	+ 31	+ 36	+ 03	+ 16		

Female Employment Changes by Industrial Orders: Yorkshire and Humberside and Great Britain, 1953-59, 1959-63, 1963-65

Percentage

Industrial Order	Changes in Estimated Numbers of Female Employees in Employment					
	1953-59 (six years)		1959-63 (four years)		1963-65 (two years)	
	Yorks. and Humberside	Great Britain	Yorks. and Humberside	Great Britain	Yorks. and Humberside	Great Britain
Agriculture, Forestry, Fishing	-19.6	-5.6	+18.6	-0.6	-11.6	-3.7
Mining and Quarrying	+20.0	+21.6	-	-0.3	+15.7	+3.2
TOTAL—PRIMARY INDUSTRIES	-7.4	-3.6	+9.3	-2.1	-1.2	-7.2
Food, Drink and Tobacco	+13.1	+2.1	+7.0	+1.6	-1.9	+0.9
Chemicals and Allied Industries	+7.3	+5.6	-0.9	-1.4	+2.6	+2.3
Metal Manufacture	+1.6	+2.2	+7.3	+2.6	+3.0	+5.4
Engineering, Elec. and Metal Goods	+3.0	+11.4	+8.6	+11.4	+6.5	-8.8
Shipbuilding and Marine Engineering	-	-0.6	-28.0	-11.6	-	-
Vehicles	+4.5	+6.0	+6.3	-0.1	+7.4	-
Textiles	-11.6	-15.7	-7.6	-11.4	-6.8	-2.4
Leather, Leather Goods and Par.	-9.1	-7.6	+4.6	-1.1	-4.8	-1.8
Clothing and Footwear	-10.6	-7.6	-6.9	-0.1	+0.8	-1.6
Bricks, Pottery, Glass, Cement, etc.	+9.1	-6.7	+20.6	-	+13.6	+3.3
Timber, Furniture, etc.	-	+4.8	-7.6	-4.0	+10.2	+5.8
Paper, Printing and Publishing	+10.7	+11.1	+9.2	+6.2	-	+2.4
Other Manufacturing Industries	+32.0	+5.6	+16.7	+9.0	+10.2	+6.6
TOTAL—MANUFACTURING INDUSTRIES	-3.1	+0.1	-0.6	+1.6	+0.4	+2.8
TOTAL—CONSTRUCTION	+50.5	+36.5	+19.5	+23.3	+11.6	+6.4
Gas, Electricity and Water	+14.3	+11.1	+29.4	+14.6	-4.6	+6.6
Transport and Communication	-1.0	+0.5	-1.6	+3.6	-4.2	+2.6
Distributive Trades	+20.5	+10.4	+9.3	+10.3	+1.2	+3.8
Insurance, Banking and Finance	+29.6	+26.6	+20.6	+20.9	+13.7	+7.8
Professional and Scientific Services	+17.6	+20.6	+16.9	+18.6	+10.4	+8.0
Miscellaneous Services	+3.8	-1.4	+6.7	+1.4	+11.5	+6.7
Public Administration	+17.1	+4.3	+6.6	+12.7	-5.7	-0.6
TOTAL SERVICE INDUSTRIES	+13.7	+11.2	+10.6	+9.6	+8.9	+5.6
GRAND TOTAL	+6.3	+6.7	+6.7	+6.6	+3.9	+4.6

A19

Employment Changes by Broad Industrial Categories (Male, Female and Total): Yorkshire and Humberside, 1953-59, 1959-63, 1963-65

Category	1953-59 (Six Years)			1959-63 (Four Years)			1963-65 (Two Years)		
	Males	Females	Total	Males	Females	Total	Males	Females	Total
Primary Industries	-12.9	-0.6	-12.9	-25.6	+0.7	-24.9	-10.3	-0.1	-10.4
Manufacturing Industries	+18.6	-2.8	+8.8	+26.6	-1.4	+24.2	+9.6	+1.1	+10.7
Construction	+1.4	+1.7	+3.1	+19.0	+1.0	+20.0	+11.1	+0.7	+11.6
Service Industries	+3.2	+42.2	+51.4	+21.6	+37.8	+59.8	-6.6	+23.5	+16.9
Grand Total	+16.6	+39.5	+56.4	+40.6	+35.1	+75.9	+4.4	+27.6	+32.0

A20

Activity Rates, Male and Female: East and West Ridings, Yorkshire and Humberside and Great Britain, 1953, 1959, 1963 and 1964

Area	Males				Females			
	1953	1959	1963	1964	1953	1959	1963	1964
East and West Ridings	79.9	60.2	60.2	80.2	36.3	37.6	36.1	38.4
Great Britain	79.4	77.4	76.9	76.7	36.8	37.9	36.4	38.2
Yorkshire and Humberside	—	79.2	76.4	—	—	36.8	38.3	—

A21

Migration of Employees to and from East and West Ridings, 1954-64

Thousands

Year	Males			Females			Total		
	Inward	Out- ward	Net Change	Inward	Out- ward	Net Change	Inward	Out- ward	Net Change
1954-55	27	31	-4	10	12	-2	37	43	-6
1955-56	28	33	-5	12	13	-1	40	46	-6
1956-57	34	29	+5	13	14	-1	47	43	+4
1957-58	27	34	-7	11	15	-4	38	49	-11
1958-59	31	30	+1	11	16	-5	42	46	-4
1959-60	36	37	-1	15	17	-2	51	54	-3
1960-61	36	41	-5	19	18	-1	57	60	-3
1961-62	33	40	-7	17	20	-3	50	60	-4
1962-63	38	37	+1	17	21	-4	55	58	-3
1963-64	36	35	+1	18	21	-3	54	58	-4
1964-64	336	347	-11	141	166	-25	477	516	-39

A22

Inter-Regional Migration of Employees: Great Britain, 1954-64

Area	Males '000			Females '000			Net Annual Average Migration as Percentage of Employees 1954-64
	In	Out	Net Gain (+) or loss (-) by Migration	In	Out	Net Gain (+) or loss (-) by Migration	
Scotland	189	274	-85	92	125	-33	-0.65
Northern Region	217	278	-61	67	111	-44	-0.69
East and West Ridings	336	347	-11	141	166	-25	-0.20
North Western	481	484	-3	210	219	-9	-0.07
Wales	193	221	-28	79	86	-7	-0.37
North Midland Region	354	340	+14	146	149	-3	+0.07
Midland Region	414	418	-4	166	176	-10	-0.12
South Western Region	306	307	+1	145	141	-5	+0.05
South East England	1,065	903	+162	544	422	+122	+0.38

A23

Inter-Regional Migration of Employees: East and West Ridings and the Rest of Great Britain, 1954-64

Thousands

Origin/Destination of Migrants	Average Number of Migrant Employees per Annum					
	To East and West Ridings			From East and West Ridings		
	Males	Females	Total	Males	Females	Total
All areas of Great Britain outside East and West Ridings	33.8	14.1	47.9	34.7	18.6	53.3
Scotland	1.9	0.7	2.6	1.4	0.7	2.1
Northern Region	8.0	2.4	9.4	4.6	1.9	6.7
North West Region	5.7	3.0	8.7	8.2	3.4	9.6
Wales	0.8	0.3	1.2	0.7	0.4	1.1
North Midland Region	6.0	2.2	8.2	6.5	2.7	9.2
Midland Region	2.6	0.8	3.4	2.8	1.1	3.9
South Western Region	0.8	0.4	1.2	1.1	0.7	1.8
South East England	8.9	4.6	13.5	11.2	6.1	17.3

A24

Manufacturing Industries: Changes in Output and Employment, *Great Britain, 1948-58

Index, Great Britain = 100

Area	Value of Net Output per Person Employed in 1958†	Growth 1948-58		
		Value of Net Output	Persons Employed	Net Output per Person Employed
Great Britain	100	100	100	100
East and West Ridings	82	81	83	87
Northern	108	115	104	111
North West	95	98	93	98
Scotland	98	94	98	102
North Midland	98	98	98	101
Midland	98	98	98	98
London and South East	107	110	110	99
Southern	107	126	120	104
Eastern	105	125	124	102
South West	98	108	107	98
Wales and Monmouthshire	118	128	108	117

* Standard regions before they were changed in 1960.

† Net Output of an industry represents the value added to materials by the process of production and constitutes the trading margin from which wages, salaries, rents, rates, taxes, advertising and other selling expenses, and all other similar charges have to be met, as well as depreciation and profits. Discrepancy occurs total employment, i.e. employees plus working proprietors.

Industrial Development Certificates: Building Completions and Approvals, Great Britain, 1960-65

Area	Percentage in Great Britain Employed in Manufacturing at 1963	Index of Area of New Buildings and Extensions Completed for Manufacturing Industries 1.1.60-30.6.65	Index of Area Approved by all IDC's 1.4.60-31.12.65
1	2	3	4
Great Britain	100.0	100	100
Yorkshire and Humberside Economic Planning Region	10.3	86	93
*Standard Regions			
East and West Ridings	8.6	90	83
North	4.9	137	192
North Western	15.6	89	65
Scotland	8.2	122	135
North Midland	7.9	57	100
Midland	13.6	63	66
South Eastern	31.8	56	52
South Western	4.6	125	136
Wales and Monmouthshire	3.6	229	161

*The Standard Regions before they were changed in 1969.

NOTES

The index number in columns 3 and 4 is based on comparisons of areas completed, column 3, and approved, column 4, in relation to the regions' share of workers employed in manufacturing.

When examining Industrial Building statistics in relation to numbers employed in manufacturing, it is perhaps necessary to remind oneself that Yorkshire has a large coal mining industry. If volumes of industrial building were related to numbers employed in 'industry' plus 'manufacturing' it indicates the comparisons relating to East and West Ridings and Humberside would be more favourable.

APPENDIX

A26

**Employment 1965: Proportion of Regional Employment
and of Female Employees, 1959, 1963, 1965,
Yorkshire and Humberside**

Area	Estimated Number of Employees in Employment 1965 1,000			Percentage of Region's Employment			Percentage of Female Employees			
	Male		Females	Total	1959	1963	1965	1959	1963	1965
	Male	Females								
Great Britain	11.1	11.1	11.1	—	—	—	—	34.8	36.5	38.4
Yorkshire and Humberside	1.1	1.1	1.1	—	—	—	—	33.9	34.6	35.4
West Yorkshire	1.1	1.1	1.1	654.1	349.0	903.1	44.2	45.4	39.6	38.4
South Yorkshire	1.1	1.1	1.1	241.3	124.7	366.0	17.4	17.6	31.6	32.6
Yorkshire Coastfield	1.1	1.1	1.1	214.6	82.7	297.3	14.7	14.3	23.9	25.0
Mid-Yorkshire	1.1	1.1	1.1	82.7	69.6	151.3	7.3	7.1	23.7	20.7
North Humberside	1.1	1.1	1.1	131.7	69.6	201.3	9.1	9.3	31.6	33.6
South Humberside	1.1	1.1	1.1	63.0	36.1	124.1	5.6	5.9	27.9	28.9
South Lindsey	1.1	1.1	1.1	23.1	13.4	36.5	1.0	1.0	34.4	36.7

Employment Distribution 1965 and Employment Changes 1959-63 and 1963-65 by Broad Categories of Industry Yorkshire and Humberside

Area	1965 Percentage of Employment in			Percentage Change 1963-65 in Number of Employees in			Percentage Change 1959-63 in Number of Employees in		
	Primary Industries	Manufacturing Industries	Construction Industries	Service Industries	Manufacturing Industries	Construction Industries	Primary Industries	Manufacturing Industries	Construction Industries
Yorkshire and Humberside	7.7	43.1	5.7	42.5	-13.7	+2.4	+13.5	+7.4	-8.1
West Yorkshire	2.3	50.4	5.9	41.0	-12.0	+1.0	+16.0	+6.0	-7.0
South Yorkshire	2.7	51.6	6.7	39.0	-26.0	+2.0	+26.0	+10.0	-12.0
Yorkshire Coalfield	3.5	26.7	7.7	33.1	-11.0	+7.0	+42.0	+6.0	-4.0
Mid-Yorkshire	6.7	28.1	9.4	36.8	-11.0	+4.6	+6.0	+3.0	-17.0
North Humberside	3.8	36.1	5.8	32.5	-17.0	+9.0	+1.0	+10.0	-8.0
South Humberside	7.3	46.4	8.8	43.5	-11.0	+13.0	+16.0	+7.0	-8.0
South Lindsey	14.5	21.9	8.6	65.1	-13.0	+7.0	+16.0	-12.0	+7.0

APPENDIX

A28

Employment Changes, Male, Female and Total: Yorkshire and Humberside, 1953-59, 1959-63, 1963-65

Area	Percentage Change in Number of Employment						Total	
	1953-59		1959-63		1963-65			
	Males	Females	Total	Males	Females	Total		
Yorkshire and Humberside	+1.9	+5.2	+2.8	+3.1	+6.7	+4.0	+0.3	
West Yorkshire ...	+0.6	-1.6	-0.5	+4.0	+8.0	+3.5	-0.5	
South Yorkshire	+1.1	+1.1	+1.1	+2.0	+5.6	+3.5	+0.6	
Yorkshire Coalfield	+1.7	+1.7	+1.7	+2.0	+11.0	+4.5	+2.0	
Mid-Yorkshire ...	+1.1	+1.1	+1.1	+1.0	+11.0	+10.0	+0.8	
North Humberside	+1.1	+1.1	+1.1	+3.0	+19.0	+18.0	+2.0	
South Humberside	+1.1	+1.1	+1.1	+7.0	+18.0	+10.0	+1.0	
South Lindsey ...	+1.1	+1.1	+1.1	-8.0	-11.0	-4.5	-2.4	

A29

Houses Completed:
Yorkshire and Humberside, 1960-65

Area	1960				1961				1962				1963				1964				1965			
	Local Authorities	Private Enterprise Assoc.	Local Authorities & Housing Assoc.	Private Enterprise Assoc.	Local Authorities	Private Enterprise Assoc.																		
Yorkshire and Humberside	12,890	13,281	9,857	16,067	19,887	15,325	16,137	15,353	14,391	18,720	17,138	20,079	17,138	20,079	17,138	20,079	17,138	20,079	17,138	20,079				
West Yorkshire	1,171	1,171	8,050	8,469	4,171	8,214	4,484	8,149	3,090	5,050	5,280	7,892	8,676	8,676	8,676	8,676	8,676	8,676	8,676	8,676				
South Yorkshire	1,171	1,171	1,171	1,171	2,386	1,600	1,552	1,681	1,066	1,678	2,485	2,294	2,678	4,033	1,561	4,033	1,561	4,033	1,561	4,033				
Yorkshire Coalfield	1,171	1,171	1,171	1,171	2,123	880	1,824	2,063	2,171	2,046	2,363	3,108	3,421	2,936	3,421	2,936	3,421	2,936	3,421	2,936	3,421			
Mid-Yorkshire	1,171	1,171	1,171	1,171	600	1,290	311	1,065	647	2,043	682	2,428	707	2,473	739	2,499	739	2,499	739	2,499				
North Humberside	1,171	1,171	1,171	1,171	303	1,109	944	1,189	1,040	1,414	1,200	1,079	2,243	1,419	1,992	1,938	1,992	1,938	1,992	1,938				
South Humberside	1,171	1,171	1,171	1,171	637	1,369	690	1,291	634	1,299	613	1,226	821	1,306	662	1,348	662	1,348	662	1,348				
South Lincolnshire	1,171	1,171	1,171	1,171	147	412	125	532	174	767	204	788	470	900	345	940	345	940	345	940				

APPENDIX

A30

Estimates of Sub-Standard Dwellings: Yorkshire and Humberside

Area	"Unf" Dwellings as at 1st Quarter 1986	Household Arrangements 1981						
		Dwellings with Rearable Value not exceeding £30,000		Dwellings without Cold Water		Dwellings without Plumb Bath		
		No.	% of Existing Stock	No.	% of Existing Stock	No.	% of Existing Stock	
England and Wales	823,713	8.9	2,463,822	18.9	243,793	1.7	2,684,331	21.7
Yorkshire and Humberside	138,244	8.7	522,383	34.2	17,943	1.3	377,644	26.6
West Yorkshire	71,384	10.6	209,820	40.7	1,577	0.3	122,214	19.2
South Yorkshire	30,548	12.6	81,140	34.5	316	1.1	64,077	23.7
Yardley Coldfield	10,085	4.2	63,159	29.3	1,087	0.6	37,943	18.7
Mid-Yorkshire	3,913	2.6	20,734	29.8	2,316	3.6	16,189	13.7
North Humberside	18,249	12.6	49,865	34.2	5,824	3.4	37,614	26.4
South Humberside	2,824	2.6	12,769	14.2	3,037	4.1	18,554	21.2
South Lindsey	1,431	2.8	11,683	23.5	3,007	7.7	11,382	25.7
						13,167	20.7	
						8,243	21.0	

A31**Housing Requirements: Yorkshire and Humberside, 1965-81**

Item	No. of Natural Increases as Retained	No. of Migration Continues
New Household Formations and Elimination of Existing Dwellings	122,450	77,300
Allowance for Vacant Dwellings	62,100	50,800
Allowance for Replacement of Dwellings to be Cleared for 'other planning reasons'	34,800	33,800
Replacement of existing 'unfit' Dwellings	138,000	138,000
Minimum Requirement	347,200	300,000
Minimum Requirement per annum 1965-81	21,700	16,800
Replacement of Dwellings with Rateable Value not exceeding £30	384,000	384,000
Maximum Requirement	731,300	684,000
Maximum Requirement per annum 1965-81	46,700	42,000

A32***Regional Statistics of School Leavers: England and Wales, Academic Year 1963-64**

Area	Percentage of all School Leavers: Boys and Girls				
	With 2 or more 'A' Level Passes	With 1 or more 'A' Level Passes	With at least 5 'O' Levels and/or at least 1 'A' Level	Going into Full-time Further Education	Leaving school at 15 years
England and Wales	8.2	10.4	18.8	18.8	80.7
Northam	5.9	7.5	14.1	15.9	60.1
East and West Ridings	7.0	8.8	18.1	14.2	80.8
North West	7.5	9.2	15.3	16.8	54.6
Wales and Monmouthshire	7.8	10.0	21.0	16.1	50.8
North Midland	7.4	9.4	18.8	15.0	59.4
Midland	7.0	6.5	16.0	13.6	56.1
Eastern	8.1	10.3	18.4	14.0	50.4
Southern	5.9	12.5	23.1	15.2	43.0
South West	10.0	12.5	22.8	13.1	48.5
Metropolitan (London and Middlesex)	10.0	12.5	20.6	12.7	35.1
South Eastern (Kent, Surrey, Sussex)	11.0	12.7	25.3	19.8	39.1

* Regions are those of the Department of Education and Science.

A33**'Indices of Education: England and Wales, 1962-64**

Area	Pupils aged 15 and 16 as % of those aged 13, three and five years earlier		Ratio of Teachers per 100 Pupils	School Building Survey of necessary expenditures
	1958-100	1964 Index		
England and Wales	138	100	100	100
Northeast	132	81	23	104
East and West Ridings	142	94	36	107
North West	145	89	94	102
Wales and Monmouthshire	130	101	102	111
North Midland	129	88	87	108
Midland	143	83	86	90
East Anglia	133	89	104	96
Southam	144	106		
London and South East	130	117		
South West	144	100	106	106

* Standard regions before they were changed in 1968.

A34**Vital Statistics: Yorkshire and Humberside, Averages 1960-64**

Area	Average Population '000	Birth Rate (England and Wales = 100)	Death Rate (England and Wales = 100)	Stillbirths per 100 total births	Perinatal mortality per 1,000 total births	Infant Mortality per 1,000 live births		
						Neonatal	Post-neonatal	Total
England and Wales	46,802.6	105	100	18.0	38.6	14.6	8.4	21.2
Yorkshire and Humberside	4,821.6	101	111	19.0	31.6	18.7	7.6	23.3
West Yorkshire	1,881.7	101	118	18.5	32.1	18.0	8.0	24.0
South Yorkshire	722.6	98	113	18.2	31.4	16.7	8.2	21.9
Yorkshire Coalfield	745.8	102	114	21.3	34.3	19.0	6.9	24.6
Mid-Yorkshire	375.8	96	100	17.5	28.1	14.5	8.4	20.9
North Humberside	480.5	104	108	18.9	30.3	15.4	7.6	23.2
South Humberside	290.6	111	104	20.0	30.1	14.4	7.3	21.7
South Lindsey	143.9	105	94	18.7	31.6	16.0	8.6	21.6

Age/Sex Structure

1. In 1951 the age/sex composition of the population of the region and of the sub-divisions was similar to that of England and Wales. The Coalfield had the youngest age structure in the region, and in this respect was the most homogeneous of the sub-divisions. In the other sub-division which exhibited a young age structure, South Humberside, there was a high concentration of younger people in Scunthorpe and, as can be expected in a growing steel town, it was the male group of working age that was particularly strong, the comparable female group being below the regional and national average. Mid-Yorkshire and South Lindsey both had high proportions in the older age groups—a feature common to rural areas throughout the country—and the highest proportion of females of working age was to be found in West Yorkshire (see Appendix B1).

2. By 1961, the overall picture had changed very little (see Appendix B1), but there were greater proportions within the young age groups than in the country as a whole. The Coalfield still showed a young age structure, as did South Humberside. There was still a relatively high proportion of females of working age in West Yorkshire, though in absolute numbers this group had diminished considerably during the decade; this decline, 48,000 women between the ages of 15 and 59, indicates an outward movement of women from the conurbation. Only in South Humberside did the number of children increase at more than the national rate, and in South

Yorkshire their numbers actually declined; South Humberside also experienced more than the national rate of increase in the population of working age, the males increasing at almost double the female rate.

3. Changes in age/sex structure over the decade are not only the result of the natural ageing of the population, but also the result of gross migration movements, that is, the difference in the age/sex structure of persons moving both into and out of the region. In this period the population of working age (between 15 years and retirement) in England and Wales had been increasing more slowly than the young persons under 15 or the persons over retirement age. In the Yorkshire and Humberside Region, however, every age group increased at a slower rate than the national one, and the total number of persons of working age actually declined. The number of men of working age increased at less than half the national rate, and the number of women aged 15-59 declined ten times faster than the national rate. In terms of actual persons, there was a greater loss of females of working age in this region than in all the rest of England and Wales. If these trends continue the majority of the increase in population that may be expected in this region by 1981 will occur in children and older persons. This is a trend shared with England and Wales, but in the region it is much more marked. On this basis the population of working age is unlikely to show any significant increase; indeed the numbers, particularly of females, may fall during that period.

Age/Sex Structures England and Wales, Yorkshire and Humberside, 1951 and 1961

Area	Year	Home Population	Median Age						Females Aged						
			0-14	15-44	45-64	65+	0-14	15-69	60+	0-14	15-69	60+	0-14	15-69	60+
England and Wales	1951	43,787,935	100.0	4,946,630	11.3	14,066,095	32.3	1,971,985	4.6	4,742,382	19.3	10,942,482	31.6	4,088,841	8.3
	1961	46,104,548	100.0	5,426,364	11.0	14,777,338	32.0	2,102,433	4.6	5,160,407	11.2	10,884,472	30.1	4,786,636	10.3
Yorkshire and Humberside	1951	2,348,940	8.4	426,814	9.8	862,241	4.6	130,446	8.6	417,448	8.6	—83,980	—0.4	5,936,995	17.2
	1961	4,480,224	100.0	525,030	11.6	1,447,300	32.2	208,873	4.4	506,798	11.1	1,452,754	21.6	339,324	8.9
West Yorkshire	1951	4,000,224	100.0	656,725	12.1	1,472,400	32.0	208,873	4.4	528,118	11.5	1,373,854	29.9	454,183	10.1
	1961	3,863,933	2.2	395,936	8.7	25,300	1.7	6,682	2.6	27,332	9.5	—84,960	—4.1	84,549	18.1
Yorks and Cleveland	1951	1,878,168	41.7	202,021	10.8	584,695	31.7	83,099	4.6	194,686	10.4	615,475	32.8	166,000	9.8
	1961	1,887,084	41.1	220,262	11.7	597,387	31.8	83,624	4.6	204,885	11.1	684,323	30.0	210,437	11.2
Cheshire	1951	9,716	0.5	1,761	9.7	2,672	0.4	—216	—0.3	14,637	7.7	—41,146	—8.0	23,837	12.8
	1961	717,471	15.6	84,667	11.4	232,728	32.4	30,725	4.3	80,386	11.3	228,862	32.0	58,662	8.2
South Yorkshire	1951	718,220	15.6	95,793	11.4	236,716	32.3	31,420	4.4	78,127	10.6	226,626	32.6	69,628	8.6
	1961	2,249	0.3	—3,004	—3.3	5,377	2.6	925	2.3	—2,829	—3.5	—8,266	—4.0	10,476	17.9
Yorks, Durham and Cleveland	1951	684,662	16.6	85,017	12.6	232,061	32.6	28,117	4.1	80,446	12.4	213,465	30.7	45,967	8.6
	1961	718,722	13.2	92,745	13.2	241,010	32.6	30,202	4.1	92,238	12.8	217,405	29.5	57,353	7.8
Mid Yorkshire	1951	38,670	5.7	7,528	8.4	8,857	3.9	2,165	7.7	5,893	6.6	—3,480	1.6	11,546	26.6
	1961	382,187	8.1	38,276	10.8	116,001	32.2	18,943	5.1	37,589	10.4	113,659	31.4	38,629	10.1
North Humberside	1951	370,124	8.0	47,981	11.3	116,327	32.1	19,857	5.4	38,008	10.6	110,983	29.9	43,473	18.7
	1961	7,837	2.2	23,696	5.6	—1,174	—1.0	1,614	—0.9	1,424	3.8	—3,278	—2.9	6,834	18.7
South Humberside	1951	253,493	8.9	35,940	12.6	85,973	32.6	12,086	4.6	37,509	11.9	80,948	30.4	25,262	8.0
	1961	281,394	9.8	58,439	12.5	138,204	30.4	16,483	4.2	82,778	12.1	139,052	31.4	37,343	8.4
South Yorkshire	1951	24,075	9.4	5,137	15.6	6,633	7.6	142,231	31.2	19,210	5.2	66,650	12.4	136,931	28.7
	1961	140,980	3.1	16,120	11.6	46,123	32.0	4,027	2.9	7,277	3.9	—3172	—8.9	—30,923	—2.2
South Lindsey	1951	180,986	3.9	16,891	12.1	44,144	31.4	4,016	2.0	15,600	11.4	40,842	26.6	14,033	10.0
	1961	—874	—0.6	—771	4.8	—1,983	—4.3	247	2.0	2,955	1.8	—20,234	—28.0	16,233	11.0

Agricultural Productivity

1. The history of British farming over the past decade has been one of continuous expansion of output from a diminishing acreage of land despite a progressive reduction in manpower.

2. The statistics tell the same story for the United Kingdom, for England and Wales only, and (so far as figures can be isolated) for the Yorkshire and Humberside Region. This Appendix examines very broadly the productivity trends of the past and the expectations for the future.

Release of Manpower

The Past

3. Over the last ten years the agricultural industry in England and Wales has released 34 per cent of its full-time workers and 6 per cent of its part-time workers (see Appendix C1). Manpower reductions in the Yorkshire and Humberside Region (33 per cent and 7 per cent respectively) closely follow the national trend. Variations within the region's three counties are more appreciable though in no sense surprising. In general, the proximity of industry results in relatively more workers leaving West Riding farms, while at the other extreme part-time workers are actually on the increase in Lindsey.

The Future

4. At the present rate of manpower reduction the agricultural industry would release some 140,000 persons in by 1970.

5. No attempt can be made to phase this release of manpower exactly, much less to distribute it geographically between regions. The phasing of any changes in the agricultural economy is a function of the combined government and industry annual price review machinery; and in practice manpower savings flow not only from economic considerations in particular areas but also from technical developments in particular farm systems or enterprises.

6. Within these limitations it may be useful to identify the major factors which should assist the industry to meet the continued reduction of agricultural manpower in Yorkshire and Humberside. These are:

- a) ever increasing mechanisation of farm operations and intensification of farm enterprises;
- b) improved premises and more efficient layout

of farm units generally to facilitate labour-demanding processes such as milking and stock feeding. Developments here should be further stimulated by the proposed extension (and wider scope) of grants under the Farm Improvement Scheme;

c) further pooling of resources, for example, through more recourse to agricultural contractors for seasonal work, and to group activity in production processes (which should similarly be stimulated by new co-operation grants proposed in Part IV of the Agriculture Bill);

d) amalgamation of smaller farm units, notably in the Pennines. The small family farm does not necessarily provide full employment and sometimes the occupier himself or members of his family may take up part-time work. The new amalgamation grants proposed in Part II of the Agriculture Bill would doubtless accelerate the existing trend for smaller units to be merged (or tacked on to larger commercial farms) with the virtual assurance of manpower savings;

e) retention of good quality land in agricultural use (this is discussed further in paragraph 10).

Release of Land

The Past

7. Over the last ten years a net total of 550,000 acres (approaching 2 per cent) of farm land has been taken out of agricultural use in England and Wales (see Appendix C2). The corresponding reduction in the region (over 45,000 acres or 1.7 per cent) is slightly below the national level. The West Riding has borne the brunt of the loss; in the face of demands for factories, homes, roads, schools and other varied needs of its large urban areas, its agricultural acreage has dropped by over 3 per cent; by comparison the withdrawal of land from agricultural use in the East Riding (0.8 per cent) and still more in Lindsey (0.2 per cent) has been marginal.

The Future

8. The future is bound to see further inroads into the nation's dwindling reservoirs of agricultural land. The further and inevitable loss of such land, coupled with the further and expected release of agricultural workers, present an exceptional challenge to the industry. If present levels of output are not merely to

be maintained but substantially increased. In fact the success or otherwise of agricultural expansion over the years ahead could be materially influenced not so much by the quantity of land the industry has to surrender but by the quality of the land that is lost.

9. There is also some correlation between the quality of agricultural land taken for development and the industry's capacity to release manpower. Thus the standard labour requirement for, say, barley is about one man per 120 acres; but those 120 acres may produce anything from 120 to 225 tons of barley, according to whether the land is on the margin of cereal cultivation (e.g. in parts of the region west of the A1) or consists of high quality soil (e.g. Holderness - warmland). It is oversimplifying to suggest that land quality, *per se*, would normally vary output by as much as 100 tons per man; nevertheless the illustration serves to show the significance of land quality as a factor in agricultural productivity.

Growth in Production

The Past

10. Despite the substantial decline in manpower and in land under cultivation over the last decade, the volume of net output from our farms has increased by rather more than one-third. This has been achieved mainly by technological improvements leading to a marked expansion in the output both of crops and livestock products in which this region has played a full part (see Appendices C3 and 4). Over the past decade, yields per acre in cereals and most crops have fully kept pace with national increases—live-stock numbers have risen; milk and egg yields have increased by 15 per cent and 25 per cent respectively; and feed conversion rates (particularly for pigs and poultry) have improved substantially.

11. The agricultural importance of the region emerges from a comparison of Appendix C2 with Appendices C3 and 4. The region has less than 10 per cent of the agricultural surface area of England and Wales, but while it carries live-stock roughly *pro rata* (12 per cent of the poultry, 11 per cent of the pigs and 8 per cent both of cattle and sheep) its contribution to the England and Wales crop output is in much greater proportion (nearly 20 per cent of the potatoes and nearly 15 per cent both of cereals and sugar beet).

The Future

12. Agriculture is called upon to save imports of food that would otherwise be necessary to meet increasing demand, while continuing to release manpower. These objectives are to be achieved through a selective expansion pro-

gramme based on the maintenance of at least the present rate of increase in productivity. The main emphasis in the programme is on the production of meat, especially beef. This will mean some expansion of milk production and will considerably increase the demand for cereal feed. In all, agriculture should be able to meet a major part of the additional demand for food which can be grown in the United Kingdom for human consumption, which is expected by 1970 to amount to some £200 million; and to supply much of the cereals required for the increase in livestock production.

13. In the nature of the case, there cannot be any question of production expanding evenly over the country as a whole. The sheer diversity of farming practice between (and indeed within) regions precludes anything of that kind. In fact each region will tend to lay particular emphasis on some commodities, while others will be relatively less significant. For Yorkshire and Humberside, the relative significance of the various commodities is shown in Appendix C8. This Appendix shows, for each commodity, the industry's own estimate of the increased production which would be technically feasible in the UK by 1970, given the necessary resources.

14. The Government's selective expansion programme does not set rigid production targets for individual commodities, because the rate of expansion of different products will depend on a number of rapidly changing factors, including the technical possibilities, the development of international commercial relations, the use of resources, and the progress made in increasing productivity. Instead the machinery of the annual review under the Agriculture Acts 1947 and 1957 will be used, year by year, to determine the agricultural production required to fulfill the programme, and the resources needed by the industry for the purpose.

15. It follows that any evaluation of progress towards fulfilling the programme can only be of UK production as a whole. However, it is not too early to discern two major technical problems which need to be surmounted in the region if it is to make a fully effective contribution to the programme.

• *Crops and grass.* Allowing that much of the extra cereals will come from still higher yields (in which the region is well to the fore) there must still be an increase in tillage and this will tend to be at the expense of the better permanent pasture. Yet the acreage of grass, thus reduced, must support still more stock. This implies that modern techniques of grassland improvement must be pushed faster and further. Indeed they will need to be pushed right up into the hills. The new land

improvement grants, and other assistance proposed for upland farms under Part III of the Agriculture Bill, should help in this direction. The Ministry of Agriculture's advisory services will have a vital part to play in ensuring that the necessary expansion both from crops and grass is achieved economically, for instance, by the most effective use of fertiliser (some of which has to be imported) and without disproportionate outlay on additional machinery, premises and equipment.

b. Stock. The required increase in livestock populations emphasises the importance of reducing losses from animal diseases—indeed present losses must be reduced. For example, to promote the all-important beef expansion it will be necessary to step up the number of calves coming forward from the dairy herd; to ensure there is no unavoidable loss of calves at or after birth; and to take precautions to ensure that intensification and high stocking rates (implicit in a reduced grassland acreage) do not enhance disease risks. The state veterinary services are now largely freed from their traditional emergency work of stamping out epidemics

like foot-and-mouth disease and swine fever, and they can give more time to questions of preventive veterinary medicine. This is reflected in the new chain of veterinary study groups that have been set up throughout the region and elsewhere to study local disease problems and to disseminate preventive techniques.

Productivity

16. The rate of increase in labour productivity in agriculture is much higher than the average improvement in manufacturing industries, and double the rate of improvement in the economy as a whole. Despite the fact that agriculture has done better than most other industries in the past, agricultural productivity is expected to rise still higher, rather more than half of it on account of rising output, and the remainder through the release of manpower. There is no doubt that the region's farmers have played their part in the achievements of the past and there is every reason to expect that they will play an equally notable part in the race for still higher productivity.

C1

Release of Agricultural Manpower,
1955-65

June-May Year	West Riding		East Riding		Lindsey		York/Humbershire		England/Wales	
	Number	Index	Number	Index	Number	Index	Number	Index	Number	Index

Full-Time Employees

1954-55	17,993	100	11,887	100	16,855	100	46,836	100	505,332	100
1955-60	14,698	82	10,581	80	13,473	86	38,782	84	424,682	84
1964-65	11,669	64	6,810	71	10,039	68	30,938	87	333,124	66

Part-Time, Seasonal and Temporary Workers

1954-55	6,282	100	2,949	100	6,213	100	16,414	100	162,344	100
1955-60	6,755	108	2,885	98	6,307	102	16,947	104	159,663	106
1964-65	5,887	91	2,405	82	6,385	103	13,447	93	142,873	94

Annual Agricultural Census Returns, June 1954, 1959 and 1964 from holdings of more than one acre.

C2

Release of Agricultural Land,
1955-65

June-May Year	West Riding		East Riding		Lindsey		York/Humbershire		England/Wales	
	Acreage*	Index	Acreage*	Index	Acreage*	Index	Acreage*	Index	Acreage*	Index
1954-55	1,243,908	100	658,806	100	636,486	100	2,738,267	100	28,278,467	100
1955-60	1,226,086	98.5	657,228	98.5	630,678	99.4	2,712,870	99.1	28,018,716	98.1
1964-65	1,204,552	98.6	654,727	98.4	633,533	99.6	2,692,817	98.3	27,729,467	98.1

* Comprising crops, grass and rough grazing on holdings of more than one acre.
Source: Agricultural Census Returns, June 1954, 1959 and 1964.

Average Production of Principal Arable Crops, 1952-53 to 1954-55, 1957-58 to 1959-60, 1962-63 to 1964-65

Commodity	Three-year period (June-May years)	West Riding		East Riding		Lindsey		Yorkshire		England/Wales	
		Average yield per acre	Average percentage								
Potatoes	1952-53—	36.605	8.6	315.446	8.7	148.805	8.1	446.512	11.2	527.283	8.3
	1954-55—	32.018	7.4	230.141	17.527	141.505	40.503	262.416	38.445	312.106	610.020
	1957-58—	32.017	9.0	271.172	18.573	173.832	49.620	9.3	440.225	97.010	9.2
	1960-61—	30.117	9.0	271.172	18.573	173.832	49.620	9.3	440.225	97.010	9.2
	1962-63—	10.758	11.8	122.029	12.894	11.21	182.482	20.348	11.91	272.778	57.287
Sugar Beet	1954-55—	11.497	12.2	140.263	14.892	12.21	178.779	20.211	12.21	406.174	60.189
	1957-58—	12.077	13.2	199.416	12.483	13.21	177.876	23.815	13.21	442.333	56.075
	1960-61—	12.077	13.2	199.416	12.483	13.21	177.876	23.815	13.21	442.333	56.075
	1962-63—	12.077	13.2	199.416	12.483	13.21	177.876	23.815	13.21	442.333	56.075
	1964-65	12.077	13.2	199.416	12.483	13.21	177.876	23.815	13.21	442.333	56.075
Cereals	1952-53—	227.376	22.8	200.554	21.4	276.560	20.321	22.1	340.889	79.058	22.1
	1954-55—	213.736	23.6	201.261	20.496	21.0	303.007	331.754	24.1	406.469	85.921
	1957-58—	213.736	23.6	201.261	20.496	21.0	303.007	331.754	24.1	406.469	85.921
	1960-61—	238.301	28.9	241.406	300.845	32.4	302.442	300.517	30.2	674.192	926.483
	1962-63—	238.301	28.9	241.406	300.845	32.4	302.442	300.517	30.2	674.192	926.483

* See also Notes to Appendix C5.

† Household yield: average yield per acre for all arable land.

‡ Adjusted in accordance with the latest figures for area used for cultivation and for the Total Production Areas.

§ Includes wheat, barley, oats, maize, rye and vetch.

|| Includes wheat, barley, oats, maize, rye and vetch.

Average Livestock Populations, 1952-53 to 1954-55, 1957-58 to 1959-60, 1962-63 to 1964-65

Three-year period (June-May years)	West Riding	East Riding	Lindsey	York/Humber		England and Wales	
				Number	Index	Index	Number
Cattle							
1952-53 to 1954-55	348,744	140,303	166,129	655,178	100	100	7,895,028
1957-58 to 1959-60	344,291	146,036	164,292	654,619	100	105	8,240,537
1962-63 to 1964-65	366,192	150,777	182,793	691,761	104	109	8,824,482
Sheep							
1952-53 to 1954-55	862,569	320,311	234,102	1,205,002	100	100	14,064,837
1957-58 to 1959-60	781,354	308,996	282,266	1,432,206	113	122	17,139,591
1962-63 to 1964-65	806,096	439,930	343,807	1,646,882	137	141	19,782,086
Pigs							
1952-53 to 1954-55	207,948	138,487	102,139	448,644	100	100	4,217,788
1957-58 to 1959-60	226,634	171,008	100,066	496,592	111	118	4,886,503
1962-63 to 1964-65	243,096	221,587	113,204	577,886	128	127	5,347,789
Poultry							
1952-53 to 1954-55	4,083,278	1,628,974	1,789,641	7,401,794	100	100	88,602,571
1957-58 to 1959-60	4,224,686	1,814,945	2,390,260	8,369,289	113	118	79,377,781
1962-63 to 1964-65	4,816,152	2,111,925	3,852,763	10,682,649	143	162	94,620,282

Source: Agricultural Census Returns, June 1962, 1963, 1964, 1967, 1968, 1969, 1982, 1983 and 1984.

NOTES: In measuring growth the capping data (Appendix C3) are reasonably reliable both for national and regional purposes. By comparison the livestock data (Appendix C4) are less reliable of production trends, especially within the limits of any one region, mainly because:

- a. what measure is the project whether more livestock numbers (e.g. between 1952-53 and 1962-63 the size of the cattle herd fell by 18,000 head, but milk production went up by over 21 million gallons); and although we have adequate statistics of livestock numbers there is no single way of measuring the total output—thus with sheep it is a matter of adding up the weight and quality of wool, fat lambs and fat sheep, and in any case;
- b. neither livestock nor livestock products respect the regional (or even national) boundaries. Thus in the extremes case an individual animal might be farmed in York/Humber and slaughtered in the West Midlands or even exported to the Colonies, and marketing processes bind milk and eggs, produced in one region, reaching consumers and packing stations in another;
- c. livestock populations are not quite entirely over elastic. To avoid undue distortion, three-year averages are used in Appendix C4, but this may give a misleading picture of the trends in livestock populations. Thus, for example, the sheep numbers in Lindsey have declined since 1963—whereas the 'five-year' picture in Appendix C4 might suggest that the flock has been increasing progressively.

It is difficult to say that over the past decade not over 10 per cent of the livestock numbers in Appendix C4, milk and egg yields have increased by about 15 per cent and 20 per cent respectively, while feed conversion rates (particularly for pigs and poultry) have improved substantially.

MAFF Appreciation of Relative Significance in Yorks./Humberside Farming Systems

Commodity		Industry's Estimate of UK Potential for Increased Production by 1970*
Cereals	SUBSTANTIAL—the region is among our premier grain areas and contributes nearly 15% of England and Wales cereal production	Extra output per annum by 1970 4,780,000 tons†
Potatoes	EXCEPTIONAL—Lindsey alone accounts for nearly 10% of the England and Wales output	380,000 tons
Beef/Veal	MODERATE—in both rearing (e.g. Pennines) and fattening (e.g. Vale of York) enterprises	125,000 tons
Pigment	APPRECIABLE—the region has just over 10% of the England and Wales pig population	125,000 tons
Poultry	GROWING—the poultry industry is beginning to concentrate into large units, several of which are in this region	100,000 tons 55,000 tons
Mutton/Lamb	LIMITED—largely centred in Pennines and Wolds	25,000 tons
Sugar Beet	SUBSTANTIAL—especially in Lindsey and the East Riding	25,000 tons
Milk	Moderate—much of the emphasis is in producer/installer businesses on the fringes of West Riding industrial areas	430,000,000 gallons‡
Horticulture	LOCAL IN THE RIDINGS—notably on North Humberside. SUBSTANTIAL IN LINDSEY—horticultural crops amount to 13% of total production in the county and have been stimulated by vegetable freezing developments	E25m. worth

Source:
Section 1.1,
Appendix 2, of
Part II of the NEP

N.B. This Appendix needs to be studied in conjunction with pages 14-17 of Appendix G.

* Although the Government has broadly accepted the technical soundness of these estimates it must "... have regard to the interests of the national economy as a whole and to our general trading relations including our commitments to other countries".

† The additional cereals are almost entirely prime for animal feed.

‡ Largely reflects the increase in the dairy herd brought in obtaining extra calves for the beef expansion.

Source: MAFF Yorks./Lancs. Region.

The Construction Industry

1. The implementation of development plans for the Yorkshire and Humber Region will depend greatly upon a regional construction industry which operates efficiently and is capable of increasing output. The public sector programmes—housing, roads, hospitals, improved amenities, urban renewal, etc.—will need to be so phased that the industry can be assured of a steady flow of work. The amount of work for the construction industry which will enter the private sector during the next five years is expected at least to equal the national increase in new work, estimated at 36 per cent or an average 5.1 per cent per year up to 1970. It is reasonable to suppose that any increase of public investment, with its consequential beneficial effect upon regional economy, will provide an incentive for the expansion of investment in the private sector.

2. The pattern of regional employment in the construction industry is considered in Chapters 3 and 4.

Output

3. There are about 8,000 firms registered with the Ministry of Public Building and Works in the Yorkshire and Humber Region. Table D1 shows their gross output by value, together with that of public authorities in the region, and the output forecast for 1970.

TABLE D1

£ millions (1965 prices)

	1965 Output	1970 Demand		
	Contractors	Public Authorities	Contractors	Public Authorities
New housing	70	10	92	13
Other new work	81	11	126	12
Total new work	151	21	218	25
Repair and maintenance	48	31	82	38
Grand total	206	62	270	64

The values take into account only the work of contractors registered with the Ministry of Public Building and Works.

Labour

4. At present the total labour force is divided between the public and private sectors as shown in Table D2.

TABLE D2

NEW WORK	Per Cent
Public Sector: Housing ..	12*
Non-Housing ..	16*
Private Sector: Housing ..	13
Non-Housing ..	17
REPAIR AND MAINTENANCE	
Public and Private Sectors: ..	43

*Including contractors' workpeople engaged on public sector projects.

The total labour force of the industry in mid-1965 was 140,000, of whom 128,000 were operatives. It is estimated that the total labour force will rise to between 146,000 and 149,000 by 1971, at an assumed average annual rate of growth of between 0.7 to 1.0 per cent.

5. There is a constant demand for skilled craftsmen (particularly bricklayers and joiners) in the region, although supplies of unskilled labour are generally more than adequate to meet present requirements. The increasing use of system building should go some way towards reducing the demand for skilled workers in the region.

6. Although the labour force of the construction industry has never been static in its areas of work, any future redevelopment and environmental improvements of the heavily industrialised areas of West and South Yorkshire will need the continued use of a large labour force. It does not follow, therefore, that the West and South Yorkshire labour force can be drawn upon to satisfy the increased requirements of an expanding North and South Humber.

Training

7. In the region there are thirty-seven colleges

of technology, schools of architecture and similar institutions, offering further training for young people at three levels. Of these, three provide courses leading to professional qualifications and eleven to HNC standard or above. At intermediate level nine teach at least to ONC standard. The remaining fourteen are for basic crafts.

8. In 1964 there were approximately 12,800 apprentices employed by firms registered in the Yorkshire and Humberside Region.

9. The three government training centres in the region have a present capacity for training 300 men in basic construction crafts each year. This capacity will shortly be increased to some 450.

Materials

10. Production of basic materials in the region can be summarised as in Table D3.

Pattern of Industry

11. Nearly a quarter of the firms on the Ministry of Public Building and Works' central register of builders consist of one man, whose livelihood as joiner, plumber, etc is dependent on small jobs, mostly repair and maintenance, within his resources and within a small radius of his premises. Every community has a proportion. For the firms employing several operatives, if the administrative difficulties can be overcome, it could be more remunerative

and productive to form small consortia (with more economical use of managerial and office staff) where the division of work can be defined between trades. A small scheme along these lines is already in operation in the North Riding. The factors of building control, taxation, investment, credit and mortgages tend to accelerate or decelerate the flow of work at short notice. As a result of taxation changes the proportion of subcontracting and mobile teams supplying 'labour only' is likely to grow.

Improving Output

12. There are a number of ways in which output could be improved. The introduction of bad weather building methods could be further developed in answer to the variable weather in all four seasons. Site lighting could also be much more extensively used for greater productivity. Some firms find that site lighting is attractive to workers because of the assurance of more pay. Other firms provide lighting only for the 'finishing trades' towards the completion of a project. Industrialised building has also a very important role in the matter of greater productivity.

13. It is the intention to review annually the level of output achieved by the construction industry and to re-assess the increase in demand likely to arise in future years. From these reviews it will be possible to determine whether the construction industry is growing fast enough to meet the challenge created by economic expansion.

TABLE D3

	1960	1964	1965
	millions		
Bricks	429	457	486
Deliveries by regional suppliers	424	469	432
thousand tons*			
Cement	437	482	486
Deliveries within the region	820	1,168	1,327
million cu. yds**			
Concrete Building Blocks			
Dense aggregate	Figures not available	1.3	1.4
Light aggregate	Figures not available	4.5	5.9
Sand and Gravel	4.2	4.9	4.1

* East and West Ridings only.

Manpower Budget for 1971

1. An explanation of the methods used in arriving at the manpower budget for 1971 (Chapter 4) is given below.

Supply of Labour in 1971

2. The National Plan made estimates of the supply of labour in East and West Ridings in 1971. This was done by applying assumed regional employee activity rates for males and females at 1971 to forecasts of the home population aged 16 and over. The Plan forecast an actual decrease of 13,000 in the number of employees in East and West Ridings, despite an increase of 145,000 in the total population.

3. These National Plan figures have been adjusted to conform to the Yorkshire and Humberside Region and modified in the light of the reduction in outward migration since 1959 and a closer assessment of future regional trends in migration and activity rates. The estimates are very sensitive to the activity rate assumptions on which they are based. A range of estimates has been calculated on the basis of the level of migration forecast in Chapter 2, and a separate estimate on the basis of the region holding all its natural population increase.

4. Assuming a continuance of past migration trends, the figures show a change in the total

supply of employees varying from an increase of 1,000 to a decrease of 18,000. The position for men varies from no change to an increase of 14,000, whilst for women it shows a decrease of between 13,000 and 19,000. If net migration ceased altogether, which is most unlikely in the forecast period, labour supply would increase by 30,000, all men.

5. The labour supply estimates relate to employees, whether employed or unemployed. The statistics of unemployment always include a considerable number of persons who, for one reason or another, cannot be absorbed into employment quickly and many others who are temporarily unemployed in the process of moving from one job to another. In order to make allowance for this, the 1965 regional level of unemployment (1.3 per cent for men and 0.7 per cent for women) has been regarded as a fair reflection of a very high level of activity and deducted from the labour supply figures to give 'effective' labour supply estimates.

6. The labour estimates also relate to mid-1971 and so take no account of the rising of the school-leaving age to 16. This will have its first effects on the supply of labour in the autumn of 1971, permanently reducing the number of people available for work in the region by between one and two per cent.

TABLE E1
Estimates of Effective Supply of Labour in 1971:
Employees (Employed and Unemployed)

1965			1971 Estimates								
			With migration			Without migration					
Males	Females	Total	Males	Females	Total	Males	Females	Total	Males	Females	Total
1,369	741	2,100	1,359	722	2,081	1,380	740	2,120	1,359	722	2,081
Deduct:											
1.3% Males			-18			-18			-18		
0.7% Females			-5			-5			-5		
Effective labour supply 1971			1,341	717	2,058	1,372	735	2,107	1,359	722	2,078

TABLE E2**Estimates of Demand for Labour at 1971:
Employees in Employment**

1966			1971			Change 1966-71		
Males	Females	Total	Males	Females	Total	Males	Females	Total
1,344	737	2,081	1,337	768	2,095	-7	+21	+14
to	to	to	19	19	38	to	to	to
1,361	764	2,115	-7	+27	+34			

7. The resultant labour supply estimates for the region for 1971 are shown in Table E1.

8. These are provisional estimates and are subject to revision from time to time as further data become available.

Demand for Labour in 1971

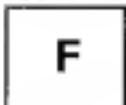
9. An estimate of the change in demand for labour in the East and West Ridings between 1966 and 1970 was made in the National Plan and indicated an increase in demand of 19,000. This figure was obtained by a purely mechanical projection based on past differences in the distribution and growth of employment regionally and nationally. This projection has been adjusted to conform to the Yorkshire and Humberside Region and also to a base year of 1966. It has also been modified in the light of a regional assessment of current and future development in individual industries against the background of past trends in employment

in the region. In view of the contrasting employment situation for men and women, separate estimates for each have been produced. Since no forecast of labour demand could ever claim to be precise, a range of changes in labour demand has been forecast for most industries. From the total of these ranges, a net average position has been calculated and a range (20,000 for total, 14,000 for men and 6,000 for women) has been taken around the average position. The labour demand forecasts relate to employees in employment and therefore exclude the unemployed.

10. Table E2 sets out the resultant labour demand estimates.

Menpower Budget

11. The manpower budget in Chapter 4 brings together the forecasts for 1971 in respect of effective labour supply in Table E1 and of labour demand in Table E2.

APPENDIX**Derelict Land****Definition of Derelict Land**

1. Derelict land is taken to mean land so damaged by industrial or other development that it is an eyesore and incapable of further use without special treatment. Examples are, disused spoil heaps, worked out mineral excavations, areas of subsidence caused by mining operations and abandoned industrial installations. But tips or excavations which are still in use or needed in connection with active industry, are not yet 'derelict' and are therefore not included in the acreages quoted.

Planning Control

2. The Town and Country Planning Act 1947

enables the location of development which is a potential source of dereliction, such as tipping, to be controlled to some extent by refusal of permission to tip on sites where a tip would be completely unacceptable, e.g. in the middle of a residential area. Control is also exercised by making planning permission subject to conditions controlling the use of land and its restoration, thus preventing the land remaining derelict. In the case of planning permission for mineral workings (excavations or tipping) conditions may similarly be imposed so as to require the subsequent removal of buildings or plant and the restoration of the land to further use. Where this is not practicable the conditions may require landscaping to be carried out. Local planning authorities have power to enforce conditions of this kind.

Peat Dereliction

3. A good deal of dereliction was created, however, before the Town and Country Planning Act 1947 came into force, and is therefore not subject to planning control. Moreover, although planning control checks much dereliction at source, the creation of a certain amount of further dereliction in the future will be unavoidable. For example, nothing can be done about the voluntary abandonment of old industrial installations. In addition, substantial areas of land are used for tipping by the National Coal Board and private industry under the provisions of the Town and Country Planning General Development Order 1963, which exempts them from the need to seek planning permission for tipping on land which was in use for that purpose on 1st July 1948. The National Coal Board is, however, carrying out a limited programme of landscaping and tree-planting on pit heaps.

4. In order to obtain an up to date and accurate assessment of the size of the problem confronting local authorities, the Minister of Housing and Local Government asked local authorities in England and Wales, in September 1964, to inform him by 31st March 1965, and thereafter annually, of details of derelict land in their area not subject to planning conditions

or other arrangements providing for after-treatment. The results of the 1965 survey for the Yorkshire and Humberside Region are not yet available. The results of the first year's survey, giving the position at the end of 1964 and comparing its conditions in other regions are shown in Table F1.

Growth of Dereliction

5. It is estimated that there may be an annual take-over of about 400 acres of land for the surface working of minerals, excluding open-cast coal, in Yorkshire and Humberside. It is also estimated that 200 acres will be required for tipping colliery spoil and other mineral waste. Some of the land taken over for surface working may, of course, be subject to the planning control referred to in paragraph 2.

Treatment of Dereliction

6. The survey showed that the treatment of only 127 acres was completed in 1964, so that it may be that local authorities have been doing no more than preventing the current backlog of 5,660 acres of dereliction needing treatment from increasing.

*Table F1

Derelict Land England and Wales, 31st December 1964

Area	Total Acreage of Derelict Land	Derelict Land per 10,000 Acres of the Total Regional Acreage	Total Acreage justifying Treatment	Percentage of Column 4 treated in 1964	Percentage of Column 4 to be treated in 1965
1	2	3	4	5	6
England and Wales	88,091	27	86,498	4.38	8.90
Northern	18,822	42	13,281	1.94	11.19
Yorkshire and Humberside	8,733	28	8,880	2.94	3.80
West Riding	3,248	38	3,811	2.87	8.78
East Riding	522	8	379	3.66	N/I
Lincoln	2,863	39	1,470	N/I	N/I
North West	12,784	65	9,453	4.32	6.61
Wales and Monmouthshire	14,191	25	8,304	4.66	8.10
East Midland	8,142	20	3,999	2.95	7.15
West Midland	12,280	38	10,991	2.75	6.49
East Anglia	2,970	10	1,673	2.34	4.48
South West	16,042	27	3,783	3.11	8.04
South East	8,117	8	3,261	4.54	4.47

*Source: The figures for the table are from the Derelict Land Return to the Ministry of Housing and Local Government Circular No. 86/64.

Statutory Powers for Dealing with Derelict Land

7. Section 89 of the National Parks and Access to the Countryside Act 1949, as amended by Section 6 of the Local Authorities (Land) Act 1963, enables local authorities to acquire derelict, neglected or unsightly land and to take such steps as appear to them expedient for either enabling the land to be brought into use or improving its appearance. These powers are not confined to National Parks.

8. Local authorities also have statutory powers which enable them to acquire and develop land, which may include derelict land, for specific purposes such as public open space and housing. In addition, under the provisions of the Town and Country Planning Act 1962, authorities may acquire land, including derelict land, and develop it in order to secure its use in the manner proposed by the development plan.

10. In most cases the costs of such work carried out by local authorities fall on their normal financial resources. There are, however, two specific Exchequer grants available for this work. Under Section 5 of the Local Employment Act 1960, the Minister of Housing and Local Government may pay grants of 85 per cent of the approved net cost of appropriate schemes to local authorities in development districts. These grants are now being extended to the new development areas under the Industrial Development Act 1966. In addition, under the provisions of the National Parks and Access to the Countryside Act 1949, the Minister of Housing and Local Government may pay grants of 75 per cent of the cost of appropriate schemes to local authorities in Areas of Outstanding Natural Beauty, and the Minister of Land and Natural Resources may make similar payments to authorities in National Parks. There are eleven local authorities in the region wholly or partly within National Parks or Areas of Outstanding Natural Beauty, but they do not, of course, contain any significant part of the industrial dereliction of the region.

11. The Local Government Bill, however, proposes that on 1st April 1967, the Minister of Housing and Local Government should be enabled to pay grants to any local authority in England and Wales towards the cost of treating derelict land. This grant will be at the rate of 50 per cent of the approved cost.

Cost of Treating Derelict Land

9. The costs of treating derelict land vary widely, depending on the location and nature of the dereliction, and the works and end-uses proposed. These costs can vary from less than £100 per acre to £2,000 per acre or more.

APPENDIX

G

Air Pollution from Industrial Causes

1. The provisions of the Clean Air Act are primarily designed for the control of smoke from residential areas; but where industrial premises are included in a smoke control order they too have to comply, and a considerable degree of improvement has been effected by the local authorities in this way. Moreover, in recent years there has been a change from hand to mechanical boiler firing, partly in order to satisfy the industrial provisions of the Clean Air Act and partly in the interest of fuel economy. Industrials are co-operating well, having been quick to realise that smoke producing plant is often inefficient and uneconomic.

2. There are, however, many industrial processes being carried on which at the present stage of scientific and technical knowledge cannot be brought up to the standards required by the Clean Air Act. Such processes

are, therefore, registered under the Alkali Act, which requires that the best practicable means shall be used to minimise smoke emissions in the same way as that Act is used for the control of noxious fumes and gases.

3. This control is exercised by the Ministry of Housing and Local Government's Alkali Inspectorate, and is a continuous process devoted to devising and applying techniques directed to reducing the amount of pollution in the community without impairing, and if possible improving, industrial efficiency.

4. The inspectorate has some notable achievements to its credit, particularly in the steel industry dominating South Yorkshire, where in one works alone over £1 million has been spent on reducing smoke emission. Advantage has been taken of technological change in the gas industry arising from the increasing gasification

of oil, making possible the closing of gasworks in built up areas. The siting of the new coal burning power stations equipped with tall chimneys and dual steam-turbine plant away from the centres of population has also led to great improvements. There are, of course, many difficult and seemingly intractable problems, but the record over the past few years has been one of steady improvement.

5. There has also been a change, which is likely to continue, to secondary sources of energy—gas and electricity. All these factors have undoubtedly led to improvements in atmospheric conditions, and while it is not possible to measure the results of each change separately, the general effect has been striking. For example, in South Yorkshire where high density housing and heavy industry are closely mixed in an area where contours vary from 105 feet to 1,500 feet above sea level, the amount of dust and grit in the atmosphere was halved between 1933 and 1966, despite a vast increase in the volume of steel production, and the number of 'fog days' was also reduced by half.

APPENDIX

H

Water Supply for South Humberside

1. Present supplies to South Humberside are derived from boreholes. Some of these are already overpumped and the scope for new boreholes is very limited. On current rates of growth, consumption will outstrip the yield from existing sources and currently planned local expansion schemes by 1981 in the area of the North East Lincolnshire Water Board, which includes Grimsby, and by 1971 in the area of the North Lindsey Water Board, which covers Scunthorpe.

2. Possible sources of additional supplies are the Rivers Ancholme and Trent. There are serious difficulties about both. The Ancholme cannot supply enough and Trent water is at present unsuitable mainly because of pollution. A pilot plant for treating Trent water has been set up just above the tidal limit at Merton. It is hoped that it will be possible to draw supplies from the Trent in about fifteen years; but this can only be done after the necessary reduction in pollution has been secured. The Trent River Authority is preparing plans designed to achieve this. These would certainly include a major programme to improve the sewage and trade effluent discharged into the Trent from Birmingham and the Black Country via the River Tame. This is bound to be expensive. There is also a possibility that the already

Smoke Pollution Measurements at Dishforth Airfield

6. Some evidence of the size of the region's problems of atmospheric pollution has recently become available from the results of a continuing study of the dispersal of pollution from urban areas, undertaken by the Ministry of Technology. Smoke measurements have been taken at Dishforth Airfield, on the northern edge of the region, at six-hourly intervals in recent years, and have been studied in conjunction with variations in wind speed and direction. The results show that air reaching Dishforth from the south (i.e. from the West Riding conurbation, the Yorkshire Coalfield and South Yorkshire) has a smoke content of 107 units compared with 26 units from the east, 27 units from the west, and 45 units from the north (including Teesside and Tyneside); the unit is one microgramme of smoke per cubic metre of air.

rapid rate of growth on South Humberside might accelerate even further. This could well necessitate the provision of additional supplies before the Trent water can be made fit for use. To meet such a contingency it might be possible to take water from the River Ouse below York for use on the southern side of the Humber estuary. The important thing is to ensure that action to provide the necessary water can be taken in good time.

3. A more long term possibility is the desalination of sea water. The research and development problems involved in producing plant capable of supplying economically the quantity of water required, rule out desalination of sea water as a source which could be counted on to meet needs arising during the next ten to fifteen years.

4. The Council is, however, anxious that the possibilities of this source of supply for the more distant future should not be overlooked. It will follow with interest the progress of a three-year research programme on which the Atomic Energy Authority and Westinghouse Ltd. are at present engaged. The aim of this research programme is to develop a distillation plant capable of producing between 50–100 million gallons per day.

Some Notes on the Health of the Region

1. A detailed enquiry on a sample basis was recently made by the Ministry of Pensions and National Insurance (now the Ministry of Social Security) into the reasons for absence from work on medical grounds. The survey was broken down by area and occupation and enables the Council to make some preliminary assessment of the economic losses due to illness in the region. It also enables the industries with the highest medical absence rates to be identified. The incidence of particular types of illness was also examined. The survey used the old regional classification and the information that follows mainly relates to the East and West Ridings.

Absence from Work on Medical Grounds: Men

2. The region has a slightly higher absence rate than the national average especially among men. The reasons for this are complex, but probably the most important single factor is the occupational structure of the region. First of all there are a very large number of coal miners whose absence rate due to illness is very much greater than the national average. Coal mining is a difficult physical job, demanding a high degree of fitness from underground workers. Secondly, there are a great number of furnace workers and engineering workers who also have health records slightly worse than the national average, though their actual absence rate is about half that of the coal miners. Furthermore, much of the engineering industry in the region is particularly heavy. Finally, there is a smaller proportion than the national average of persons in occupations in Social Classes 1 and 2. This is the section of the community with least absence on health grounds. A proper understanding of the problem of absence due to ill health in the region is most likely, therefore, to come from an occupational approach, which must also take account of the special problems of particular industries.

3. In 1961-62 it is likely that about 12 million working days were lost in the region by men drawing short term sickness benefit (ignoring absences for less than four days for which benefit is not claimable, and men incapacitated for very long periods). Preliminary estimates indicate that at least some 2.5-3.3 million working days must be lost because of illness

in the Yorkshire coal mining industry. (This figure excludes accidents and short term absence for which benefit is not drawn.) It seems likely that at least a million working days are lost in each of the industrial groups of metal manufacture, construction, transport and communication, and textiles, and at least a million and a half working days in engineering and metal goods.

4. The enquiry showed that it was the medium and smaller towns in the West and East Ridings that had less satisfactory health records. Towns with populations between 50,000 and 100,000 had incapacity rates for men about 4% per cent worse than the national average, and towns with populations between 20,000 and 50,000 had the worst record in Great Britain, with a male rate 9% per cent above the national average. The smaller towns showed rates for men of 6% per cent above national average, while rural areas also had an adverse record, 4.2% per cent worse than the national average. The occupational structure of the region is such that many of the male occupations with the greatest absence rates, especially coal mining, centre on particular small and medium sized towns, underlining the need for an occupational approach to improved health. It is not possible from the study to make any statements about health of men in the County of Lindsey, but in rural areas in the North Midlands Region, which at that time included Lindsey, the number of days of incapacity was only 94 per cent of the national average.

Absence from Work on Medical Grounds: Women

5. The number of days of incapacity for women other than married women was 8 per cent above the national average, for the East and West Ridings, while married women's absence was close to the national average. The incapacity rate for married women in the textile industry was 44 per cent above the national average, and for clothing workers it was 20 per cent above. The corresponding figures for single women were 38 per cent for textiles and 12 per cent for clothing. Once again, therefore, there are important occupational aspects of the problem. And once again respiratory illness is important. It is interesting to note that women show a social gradient in mortality from bronchitis when this is based on their husbands' occupations, i.e. miners' wives die from

bronchitis at a rate in excess of doctors' wives, which is identical with the ratio for miners to doctors.

6. The number of women in the labour force is less than the number of men and the economic loss resulting from absence is accordingly less serious. It is nevertheless substantial, being about one half of the loss through men's absences.

7. Respiratory infections are a particularly important cause of absence in the region. About a third of the incapacity among men is due to respiratory illness. The bronchitis rate for married women in the West Riding conurbation is 69 per cent above the national average. Chronic bronchitis presents a serious problem. The highest rates occur in the small and medium sized towns. Links between respiratory illness and atmospheric pollution are complex, but leading medical authorities are agreed that high levels of pollution are bad for

the health of the lower respiratory tract, and the medical evidence from Yorkshire supports this.

8. For example, the high levels of atmospheric pollution found in many parts of the region have been found to have a significant effect on the lower respiratory health of young children, and a proportion of young children in heavily polluted areas can be shown to be suffering from significant lung damage at relatively early ages. There is also a relatively high incidence of ear trouble in such places. An important health target for the region is thus clearly to reduce atmospheric pollution. Most progress in this respect has been made in the larger cities of the West Riding. It is the medium and small sized towns in the region, particularly on the Yorkshire Coastfield, that need to take more vigorous action on grounds of health, as their incapacity rates are so high compared with the larger towns in the region and with the West Riding conurbation.

A REVIEW OF YORKSHIRE AND HUMBERSIDE

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Preface

This report on the Yorkshire and Humberside Planning Region has been prepared by the Yorkshire and Humberside Economic Planning Council, whose members have been greatly assisted by the Economic Planning Board. It is more than just a collection of figures and facts. The expressions of view and suggestions for government action set out are those of the Council. The report is being published so as to enable all those concerned with the problems of planning in the region to express their views on the findings contained in it. These should be communicated, in writing, to the Secretary, Yorkshire and Humberside Economic Planning Council, City House, Leeds, 1.

The estimates and forecasts contained in this report were completed by June 1968, and they do not, therefore, take account of any likely effects arising from the economic measures announced by the Prime Minister on the 20th July. Although these measures are expected to have considerable effects on certain elements of the economic analysis in the short run, their effect in the longer term should not be such as to invalidate the broad picture shown.

The two main purposes of regional economic planning are:

1. to provide for a full and balanced development of the country's economic and social resources;
2. to ensure that the regional implications of growth are clearly understood and taken into account in the planning of land use, of development—in particular of industrial development—and of services.

Regional planning techniques are still at an early stage of development. Until they are more fully developed it is inevitable that there must be some lack of definition and some overlapping in the various fields of investigation which together form a 'regional review' and the basis for a 'regional plan'.

Attempts to identify population, employment and industrial trends, to take stock of regional

resources, to consider land use and transport problems, to examine social and environmental shortcomings, to analyse alternative policies—all these processes produce the *raw material* of a regional plan, but not the regional plan itself. The final stages in the formulation of a regional plan must depend on national decisions, on the long-term apportionment of resources, investment and development between the various regions, and the degree of preferential treatment which, in the national interest, must be given to this or other regions.

It is necessary, therefore, to state a basic premise of this review—that it does not attempt to produce a regional plan, either economic or physical. It is the report of the Regional Economic Planning Council's first survey of the area, based mainly on information collected and analysed by the various departments of central government, constituting the Economic Planning Board. For the most part it presents a statement of the main demographic, economic and social circumstances of the region as a whole and of its sub-divisions. In the economic field it estimates the likely consequences of present trends (particularly in relation to employment) up to 1971; in other respects it indicates problems which seem likely to arise in the period to 1981 and beyond. Throughout, the review identifies gaps in the information at present available which need to be filled, and suggests lines for further enquiries and research.

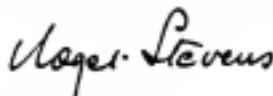
From time to time the Council indicates in the review directions along which future development might be planned; but it is emphasised that such indications are tentative and will need reconsideration as further information, both at national and regional level, becomes available. Information derived from the recently announced investigation of the potential of Humberside as a national growth area will be of particular importance in this connection. The Council, therefore, sees the study as the first stage in a continuing and evolutionary process of regional planning.

Foreword

How best can a great Region like Yorkshire and Humberside thrive ?
Should we rely on prosperity while it lasts, or should we try to plan the
Region's future, with an eye on the developing pattern of Britain as
a whole ?

This review has been prepared by the Region's Economic Planning
Council in the belief that looking ahead is the best way of keeping ahead.
The Council surveys the scene to the best of its ability and experience
with the help of the Planning Board. We ask readers to examine the view,
not necessarily to share it.

Central government may not agree with all or part, nor may local
authorities, industry or individuals. It is healthy that the first findings of
a new body should provoke discussion. We want to know about
different shades of opinion. There must be room for debate when the
livelihood and happiness of over four million people are involved.



Sir Roger Stevens, GCMG
Chairman,
Yorkshire and Humberside
Economic Planning Council.
August, 1964.



Fig. 1 Economic Planning Regions of Great Britain